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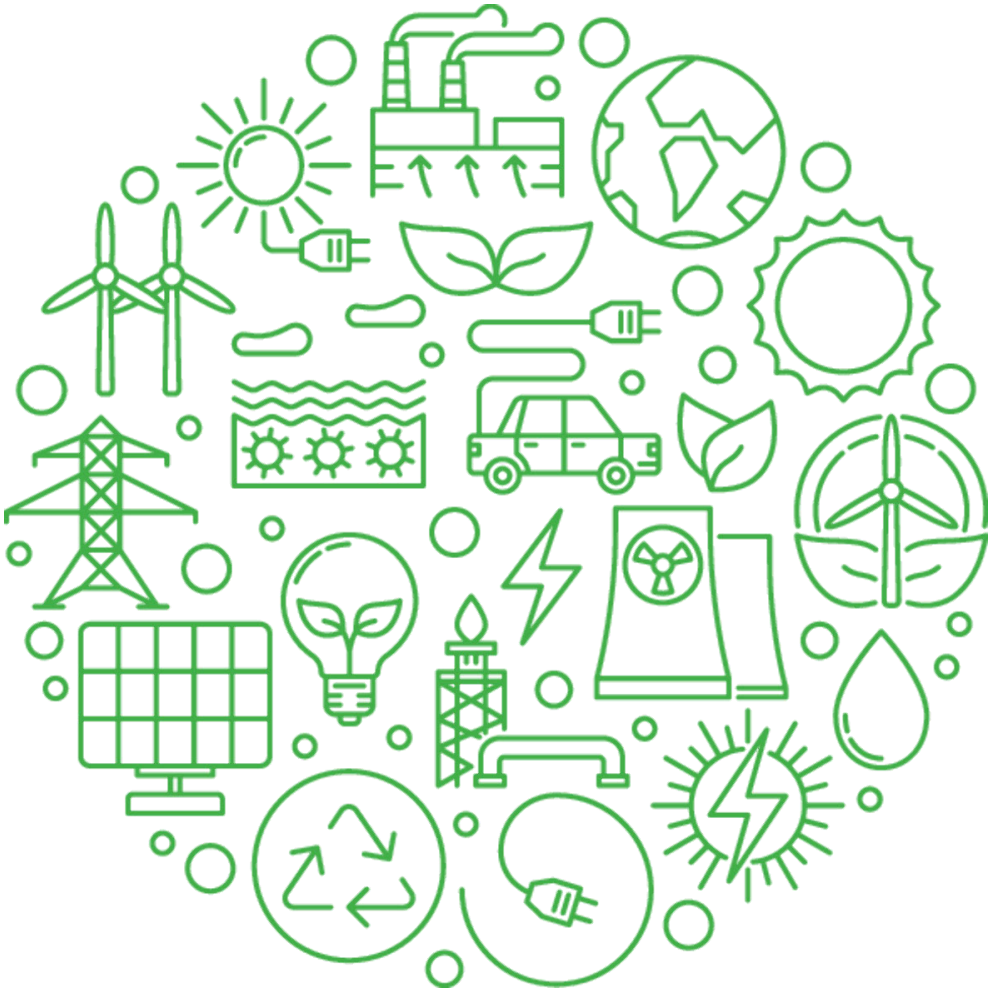

Wage Price Index forecasts

Prepared for the Australian Energy Regulator

21 March 2022

Deloitte Access Economics

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[redacted]
Australian Energy Regulator
By email: [redacted]

21 March 2022

Dear [redacted]

[redacted] price index (WPI) forecasts

I enclose Deloitte Access Economics' report on the WPI for Australia, Victoria and Queensland prepared for the Australian Energy Regulator.

This report has been drafted on the basis of the forecasts that underpin the December 2021 quarter *Business Outlook* publication that relies on the September 2021 quarter Australian Bureau of Statistics National Accounts and the December 2021 WPI release.

Yours sincerely

[redacted]

[redacted]
Partner
Deloitte Access Economics Pty Ltd

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Glossary

AAWI	Average Annualised Wage Increase
ABS	Australian Bureau of Statistics
AEMO	Australian Energy Market Operator
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AWE	Average Weekly Earnings
AWOTE	Average Weekly Ordinary Time Earnings
CAGR	Compound Annual Growth Rate
CPI	Consumer Price Index
EBA	Enterprise Bargaining Agreement
FWC	Fair Work Commission
GDP	Gross domestic product
GSP	Gross state product
GW	Gigawatt
LNG	Liquefied Natural Gas
MW	Megawatt
MWh	Megawatt hour
NEM	National Electricity Market
PV	Photovoltaics
RBA	Reserve Bank of Australia
SFD	State Final Demand
WPI	Wage Price Index

Executive Summary

Australian wages growth gathers pace as the economy recovers from COVID

The Wage Price Index (WPI) grew 0.6% in the December quarter of 2021, with annual growth (i.e. calendar year 2021 over calendar year 2020) reaching 2.0%. The rate of annual wage growth increased from 1.7% in the September quarter as the economy rebounded from Delta lockdowns, boosting labour demand at a time when the supply of workers remained constrained.

Many firms are responding to labour shortages by offering a range of measures that do not add to base wages. This includes bonuses, flexible work arrangements, training and hiring staff with less experience. This has seen the WPI including bonuses grow by 2.8% over the year (i.e. December quarter 2021 over December quarter 2020), compared to the 2.3% gain in the WPI excluding bonuses.

The retail trade industry WPI grew 1.2% in the December quarter of 2021, the fastest quarterly gain for any industry since the September quarter of 2015. Annual wage gains were fastest in the professional services (2.5%) and accommodation and food services industries (2.3%), driven by the impact of strong demand for labour and award wage increases respectively. The slowest annual wage gains were in the arts and recreation (1.3%) and utilities industries (1.4%).

Wage gains are forecast to accelerate from 2021-22 alongside the recovery in the Australian economy, an increase in Consumer Price Index (CPI) inflation and inflation expectations, workers switching jobs to take advantage of greater bargaining power, and employers turning to increases in base pay rather than bonuses to attract staff.

However, there are a number of factors that may limit the pace of wage gains in the coming years. This includes elevated levels of underemployment, inertia in the wage-setting process, employers looking to control costs, the easing of international border restrictions, scheduled superannuation guarantee increases, and trends such as automation of work processes and an increase in insecure work.

Looking ahead, Deloitte Access Economics forecasts nominal wage growth of 2.3% in 2021-22 and 2.5% in 2022-23. The pace of wage gains is forecast to accelerate over the medium term, reaching 2.9% in 2026-27.

Chart i National WPI forecasts

Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

Real wages (or nominal wages adjusted for inflation) are forecast to fall 1.2% in 2021-22 as CPI growth of 3.5% outpaces wage growth of 2.3%. An easing of CPI inflation should see real wages remain flat in 2022-23. Real wage growth is forecast to increase gradually to reach 0.6% by 2026-27.

Compared with the forecasts presented in Report 3B, nominal wage growth has been revised higher.[1] This reflects the combination of an acceleration in the economic recovery, wage pressures in particular industries and faster than anticipated increases in CPI inflation. Nominal wage growth has been revised higher by a cumulative 1.1 percentage points across the period from 2021-22 to 2026-27.

However, higher inflation forecasts mean that real wages have been revised downwards by a cumulative 0.9 percentage points from 2021-22 to 2026-27 compared to Report 3B. This mainly reflects higher CPI inflation forecast in 2021-22 and 2022-23 reducing real wages in those years. Real wage growth has been revised higher by a cumulative 0.5 percentage points across the forecast period from 2023-24 to 2026-27.

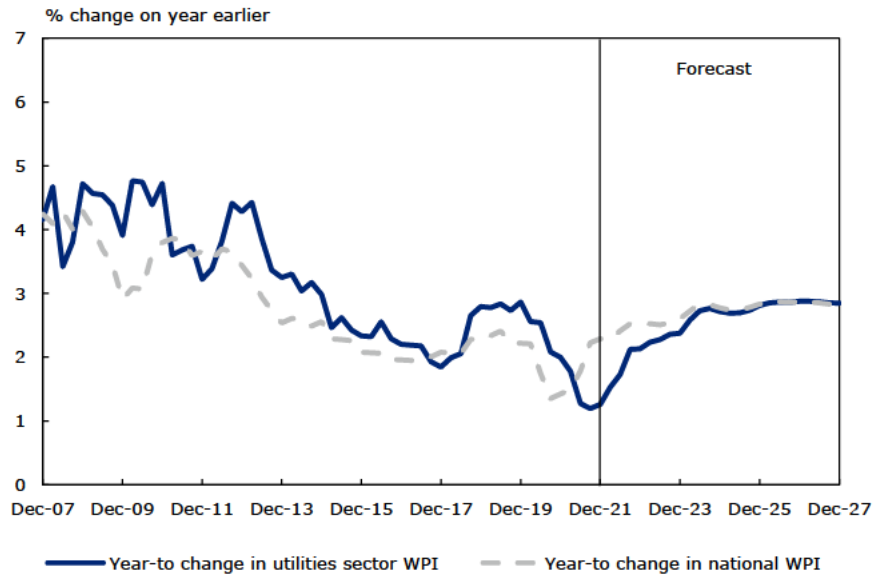
Utilities wages growth remains subdued but is forecast to accelerate

Utilities industry wages grew 0.6% in the December quarter of 2021 to be 1.4% higher in 2021. This compares to the 2.0% gain in all industry wages over the same period, with the utilities industry experiencing the second slowest growth of any industry in 2021.

The recent slowdown in wage growth is partly due to falls in utilities industry employment that have added to spare capacity in the labour market, falls in utilities industry output that weigh on employers' willingness to increase wages, and weak activity in industries such as mining that typically compete with the utilities industry for labour.

The utilities WPI is forecast to grow by 1.4% in 2021-22, increasing to 2.2% in 2022-23 before reaching 2.9% in 2026-27. Utilities wages are forecast to grow at a marginally slower rate than wages across the wider Australian economy over the medium term. This reflects the fact that utilities output is forecast to grow at a compound annual growth rate (CAGR) of 1.7% from 2020-21 to 2026-27 compared to a CAGR of 2.9% in the wider Australian economy.

Chart ii National utilities industry WPI forecasts



Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

[1] Report 3B was finalised in November 2021 and included a September 2021 last actual for WPI. The forecast period was 2020-21 to 2026-27.

Real wages in the utilities industry are forecast to fall 2.0% in 2021-22 as inflation outpaces nominal wage growth. Real wage gains are forecast to fall 0.3% in 2022-23 reflecting upward pressure on nominal wages and a moderation in CPI inflation. Real wages are forecast to gradually increase thereafter, reaching 0.6% by 2026-27.

Forecasts for utilities industry nominal WPI growth have been revised higher from 2021-22 to 2026-27 compared to the forecasts in Report 3B. Utilities wage growth has been revised up by a cumulative 1.2 percentage points across the forecast period. This is primarily due to the faster than expected recovery in the Australian economy and CPI inflation.

Utilities industry real WPI growth has been revised down by 1.0 percentage points in 2021-22 and 0.5 percentage points in 2022-23, as upward revisions to CPI inflation outweigh upward revisions to nominal wages. Utilities industry real WPI growth has been revised up by a cumulative 0.7 percentage points from 2023-24 to 2026-27 as nominal wage gains are expected to catch-up to CPI inflation.

Victorian utilities wages forecast to grow at a slower pace relative to both Victorian all industry wages and Australian utilities wages

Wages in the Victorian utilities industry grew by 1.7% in 2021, above the 1.4% gain in Australian utilities wages. This has been partly due to the timing of the recovery in the Victorian utilities industry, as well as the faster Average Annualised Wage Increase (AAWI) in current Victorian utilities EBAs (2.7%) compared to the national equivalent (2.5%).

Victorian utilities industry nominal wages are forecast to grow 1.8% in 2022 and 2023. Wage gains are then expected to accelerate, reaching 2.6% growth in 2027 as utilities sector output gradually recovers. These forecasts represent a cumulative upward revision in nominal wages growth of 0.6 percentage points from 2022 to 2027 compared with forecasts in Report 3B.

Victorian utilities industry wage growth is forecast to lag growth for wages in the broader state economy, as well as wages in the national utilities industry. This reflects forecasts for modest growth in Victorian utilities industry output compared to the Victorian all industry average. The outperformance of Victorian utilities industry output relative to national utilities industry output has also moderated. This follows the slowdown in Victorian population growth prior to the outbreak of COVID, as well as the proportionally large impact of international border restrictions from March 2020 to February 2022 on rates of population growth in Victoria compared to Australia.

Victorian utilities industry real WPI is forecast to fall by 1.6% in 2022 and 0.4% in 2023 as higher CPI inflation outweighs higher nominal utilities industry WPI. Real wages are then forecast to grow from 2024, reaching 0.4% by 2027. These forecasts represent a downward revision of 1.4 percentage points in 2022 compared to Report 3B, a downward revision of 0.2 percentage points in 2023 and a cumulative upward revision of 0.3 percentage points from 2024 to 2027.

Queensland utilities wages are expected to accelerate from current levels and grow faster than Australian utilities wages over the medium term

Wages in the Queensland utilities industry grew by 1.3% in 2021, compared to a 1.9% increase in Queensland all industry WPI. This reflects the modest pace of growth in output and employment in the Queensland utilities industry compared to other industries in Queensland. Queensland utilities wages also grew at a marginally slower pace compared to Australian utilities wages.

The Queensland utilities industry WPI is forecast to grow at a slower rate compared to the national utilities industry through to 2022-23. Beyond this, the Queensland utilities industry WPI is forecast to grow marginally faster than national utilities WPI amid the impact of higher rates of population growth in the state.

Queensland utilities industry nominal wages are forecast to grow by 1.3% in 2021-22 and 1.7% in 2022-23 before accelerating to a gain of 2.9% in 2026-27. These forecasts represent a cumulative

upward revision in nominal wages growth of 2.3 percentage points from 2021-22 to 2026-27 compared with forecasts in Report 3A.[2]

Queensland utilities industry real WPI is forecast to fall by 2.7% in 2021-22 and 0.5% in 2022-23 as nominal wage growth is outweighed by CPI inflation. Real wages are forecast to grow by 0.3% in 2023-24 before accelerating to a gain of 0.6% in 2026-27. These forecasts represent a downward revision of 2.6 percentage points in 2021-22, a downward revision of 0.3 percentage points in 2022-23 and a cumulative upward revision of 1.3 percentage points from 2023-24 to 2026-27 compared to Report 3A.

Australia's economy set to strengthen in 2022 despite uncertainty around COVID and the war in Ukraine

The Australian economy grew by 4.7% in 2021 despite widespread COVID restrictions and several lockdowns. Elevated vaccination rates enabled the easing of COVID restrictions in late 2021, leading to an increase in consumer spending amid a degree of pent-up demand and a draw-down on household savings accumulated during the pandemic.

The Omicron outbreak weighed on activity in early 2022. High COVID case numbers led to workforce shortages as employees caught the virus or were forced to isolate after being identified as close contacts. The high degree of community transmission also meant that many people limited their own activity in an effort to reduce their risk of infection.

The spread of Omicron did not disrupt the underlying strength of the labour market in early 2022. Despite a large fall in the number of hours worked in January, employment increased by around 13,000 as businesses believed that the outbreak would be temporary. Overall, employment is 2.0% above the pre pandemic levels in February 2020, with the employment to population ratio at an all-time high. Looking ahead, the number of job advertisements in January 2022 is 63% above pre-COVID levels seen in February 2020. This suggests that the labour market will continue to tighten in 2022 alongside the growth in the wider economy.

Although the outlook is subject to a high level of uncertainty, the Australian economy is forecast to grow by 2.9% in 2021-22 before accelerating to 4.0% in 2022-23 and moderating to 2.9% in 2023-24. Growth over the next two years is set to be underpinned by private consumption, private business investment and exports. The absence of harsh restrictions and increased vaccination rates suggests that the Australian economy will be more resilient and its recovery more sustainable compared with previous years.

Utilities output expected to slow

Utilities industry output increased by 0.3% over 2021. Activity fell in the electricity supply (-0.7%) sub-industry but rose in the water supply and waste services (1.6%) sub-industry, together these account for more than 95% of industry output. Elsewhere, output in the gas supply sub-industry was flat over 2021.

Average operational demand in the National Electricity Market (NEM) fell by 2.3% over the year to the December quarter of 2021 – reaching the lowest fourth quarter average since 2005 (when Tasmania joined the NEM). This was driven by a sharp increase in solar photovoltaic (PV) generation that contributed to large reductions in daytime demand, which more than offset the increase in underlying demand from the grid.

Looking ahead, the Australian Energy Market Operator (AEMO) forecasts NEM consumption to decline over the next five years. Higher demand from a growing population and economy is expected to be offset by the increased use of distributed energy technologies (such as rooftop PV, battery storage and other small-scale generation resources), improvements in energy efficiency,

[2] Report 3A was finalised in May 2021 and included a March 2021 last actual for WPI. The forecast period was 2020-21 to 2026-27.

as well as stronger growth in less energy-intensive industries compared to more energy-intensive industries such as manufacturing.

Utilities industry output is forecast to grow by 3.8% in 2022, compared to a gain of 3.6% for the wider economy. The outperformance of the utilities industry is driven by the lockdowns in 2021, which negatively affected growth for industries such as tourism, the arts and education proportionally more than the utilities industry. Utilities industry output is then forecast to grow by 1.7% in 2022-23 compared to a 3.1% gain in the wider economy.

Table i State WPI forecasts, all industries

Financial year changes in nominal WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
National	1.5	2.3	2.5	2.7	2.8	2.8	2.9
Queensland	1.6	2.4	2.5	2.8	2.8	2.9	2.9

Financial year changes in real WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
National	-0.1	-1.2	0.0	0.4	0.5	0.5	0.6
Queensland	-0.5	-1.6	0.3	0.5	0.5	0.5	0.6

Calendar year changes in nominal WPI

	History	Forecast					
Annual % change	2021	2022	2023	2024	2025	2026	2027
National	2.0	2.4	2.5	2.8	2.8	2.9	2.8
Victoria	2.0	2.3	2.5	2.7	2.7	2.8	2.8

Calendar year changes in real WPI

	History	Forecast					
Annual % change	2021	2022	2023	2024	2025	2026	2027
National	-0.9	-0.9	0.3	0.5	0.4	0.5	0.5
Victoria	-0.3	-1.0	0.2	0.5	0.4	0.5	0.5

Note: annual % change refers to the year-average change.
Source: ABS, Deloitte Access Economics.

Table ii Key variables, Australia

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Output	1.5	2.9	4.0	2.9	2.7	2.6	2.4
Consumer price index	1.6	3.5	2.5	2.3	2.3	2.4	2.3
Wage Price index	1.5	2.3	2.5	2.7	2.8	2.8	2.9
Ave. weekly earnings	1.6	2.2	3.5	3.1	3.1	3.1	3.1
Ave. weekly ordinary time earnings	2.7	2.3	4.3	4.0	3.7	3.7	3.7

Source: ABS, Deloitte Access Economics.

Table iii Economic variables, Australia

	History	Forecast					
Annual % change (unless noted)	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**
Consumption							
Private sector	1.0	2.1	7.0	3.4	2.9	2.5	3.0
Public sector	6.0	3.7	0.7	0.6	-0.1	1.0	2.1
Private sector investment							
Non-business housing	3.2	6.9	-1.7	-2.6	1.5	2.5	-1.3
Non-business real estate	26.9	9.3	-12.8	-5.9	-2.0	-0.7	-4.1
Non-residential building	-11.4	5.1	6.6	10.7	4.1	6.2	4.0
Engineering construction	-1.6	7.2	4.9	2.5	3.6	5.6	3.5
Machinery and equipment	3.0	11.5	1.7	3.5	2.5	5.0	2.8
IP and biological	2.1	7.5	3.8	8.4	5.6	7.0	4.8
Public investment							
General Government	6.5	15.5	-1.7	-4.8	-1.1	2.9	2.9
Public enterprises	-0.8	3.9	-3.8	0.7	1.1	2.2	1.3
Domestic final demand	2.5	4.2	3.9	2.3	2.1	2.6	2.6
Private sector	1.3	3.7	5.4	3.2	2.9	3.1	2.7
Public sector	5.8	5.5	0.1	-0.3	-0.2	1.4	2.2
Gross national expenditure	3.3	3.5	4.1	2.2	2.0	2.6	2.6
International trade							
Exports	-8.3	1.8	9.3	9.5	6.2	3.3	2.0
Imports	-2.9	6.3	10.7	6.6	3.7	3.3	2.7
Total output (GDP)	1.5	2.9	4.0	2.9	2.7	2.6	2.4
Non farm output	1.1	2.7	4.1	3.0	2.7	2.7	2.4
Employment	0.6	2.3	1.7	1.3	1.2	1.3	1.3
Unemployment rate (%)	6.2	4.5	4.2	4.1	4.1	4.2	4.3

Source: ABS, Deloitte Access Economics. All variables (except for population, employment and unemployment) expressed in inflation-adjusted terms.

Table iv Wages and prices, Australia

	History	Forecast					
Annual % change	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**
Consumer price index (CPI)	1.6	3.5	2.5	2.3	2.3	2.4	2.3
Wage price index (WPI)							
Nominal	1.5	2.3	2.5	2.7	2.8	2.8	2.9
Real	-0.1	-1.2	0.0	0.4	0.5	0.5	0.6
Average weekly earnings (AWE)							
Nominal	1.6	2.2	3.5	3.1	3.1	3.1	3.1
Real	0.0	-1.2	1.0	0.9	0.8	0.7	0.8
Average weekly ordinary time earnings (AWOTE)							
Nominal	2.7	2.3	4.3	4.0	3.7	3.7	3.7
Real	1.0	-1.2	1.7	1.7	1.4	1.3	1.4
Unit labour costs							
Nominal	0.1	5.8	2.6	3.0	3.1	3.1	2.8
Real	-1.6	2.2	0.1	0.7	0.8	0.7	0.5

Source: ABS, Deloitte Access Economics.

Table v Industry wages, Australia

Financial year changes in nominal national industry sector WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
All industries	1.5	2.3	2.5	2.7	2.8	2.8	2.9
Utilities	1.8	1.4	2.2	2.5	2.7	2.8	2.9

Financial year changes in real national industry sector WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
All industries	-0.1	-1.2	0.0	0.4	0.5	0.5	0.6
Utilities	0.2	-2.0	-0.3	0.2	0.4	0.4	0.6

Source: ABS, Deloitte Access Economics.

Table vi State utilities industry wages

Financial year changes in nominal utilities sector WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
National	1.8	1.4	2.2	2.5	2.7	2.8	2.9
Queensland	1.9	1.3	1.7	2.5	2.8	2.9	2.9

Financial year changes in real utilities sector Wage Prices

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
National	0.2	-2.0	-0.3	0.2	0.4	0.4	0.6
Queensland	-0.2	-2.7	-0.5	0.3	0.5	0.5	0.6

Calendar year changes in nominal utilities sector WPI

	History	Forecast					
Annual % change	2021	2022	2023	2024	2025	2026	2027
National	1.4	1.9	2.3	2.7	2.7	2.9	2.9
Victoria	1.7	1.8	1.8	2.3	2.4	2.6	2.6

Calendar year changes in real utilities sector Wage Prices

	History	Forecast					
Annual % change	2021	2022	2023	2024	2025	2026	2027
National	-1.4	-1.4	0.1	0.4	0.4	0.5	0.6
Victoria	-0.6	-1.6	-0.4	0.1	0.1	0.3	0.4

Source: ABS, Deloitte Access Economics.

1 Background

The Australian Energy Regulator (AER) commissioned Deloitte Access Economics to provide forecasts for wage price growth for the electricity, gas, water and waste services (utilities) industry to 2027 for Australia, Victoria and Queensland.

Specifically, the AER has requested:

- Annual Wage Price Index (WPI) forecasts for Australia and relevant states and territories.
- A brief analysis of the key influences on the forecast changes in the WPI, including:
    - An overview of the national and state economic outlook, including a discussion of the outlook for the utilities industry.
    - An analysis of the national and state outlook for wages for all industries and the utilities industry.
    - A discussion of the key drivers for wage growth including inflationary trends, productivity trends, Enterprise Bargaining data, and relevant cyclical factors.
- A description of the methodology and assumptions used to forecast WPI.
- An analysis of how the legislated changes to the superannuation guarantee will affect forecast labour price growth.

This report has been drafted on the basis of the forecasts that underpin the December 2021 quarter *Business Outlook* publication that relies on the September 2021 quarter Australian Bureau of Statistics (ABS) National Accounts and the December 2021 WPI release.

This is Report 4 in the current determination period and follows Report 3B that was delivered in December 2021. A detailed methodology description can be found in Report 1 that was delivered in August 2020.

2 Australia

2.1 Economic outlook

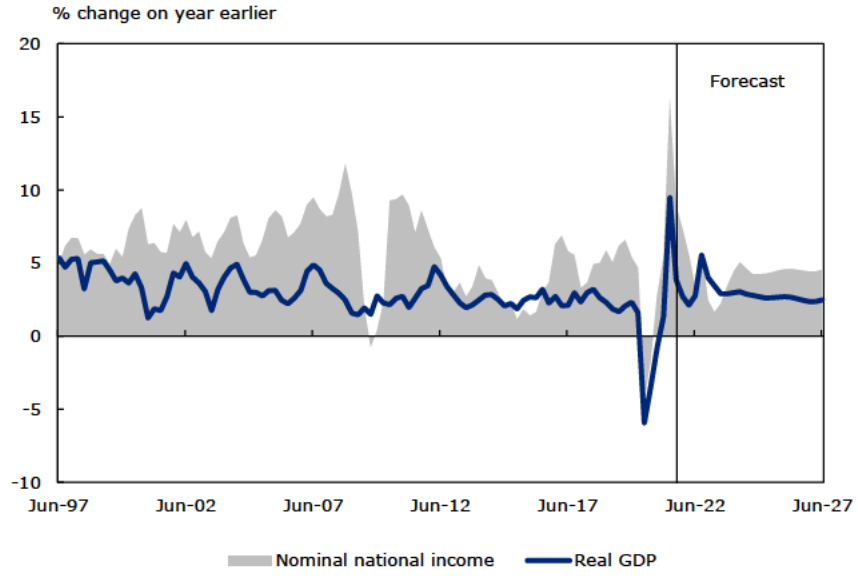
2.1.1 Overview

The Australian economy grew by 4.7% in 2021 despite widespread COVID restrictions and several lockdowns. Elevated vaccination rates enabled the easing of COVID restrictions in late 2021, leading to an increase in consumer spending amid a degree of pent-up demand and a draw-down on household savings accumulated during the pandemic.

The Omicron outbreak weighed on activity in early 2022. High COVID case numbers led to workforce shortages as employees caught the virus or were forced to isolate after being identified as close contacts. The high degree of community transmission also meant that many people limited their own activity in an effort to reduce their risk of infection.

The number of new COVID infections appears to have peaked in January 2022. Measures of mobility have recovered somewhat, but remain below pre-COVID levels. Business and consumer confidence have also steadied from the lows seen during the Omicron outbreak. However, confidence may be weighed down by the war in Ukraine, rising oil prices and concerns around a faster than expected increase in inflation.

Chart 2.1 Australian production and national income growth



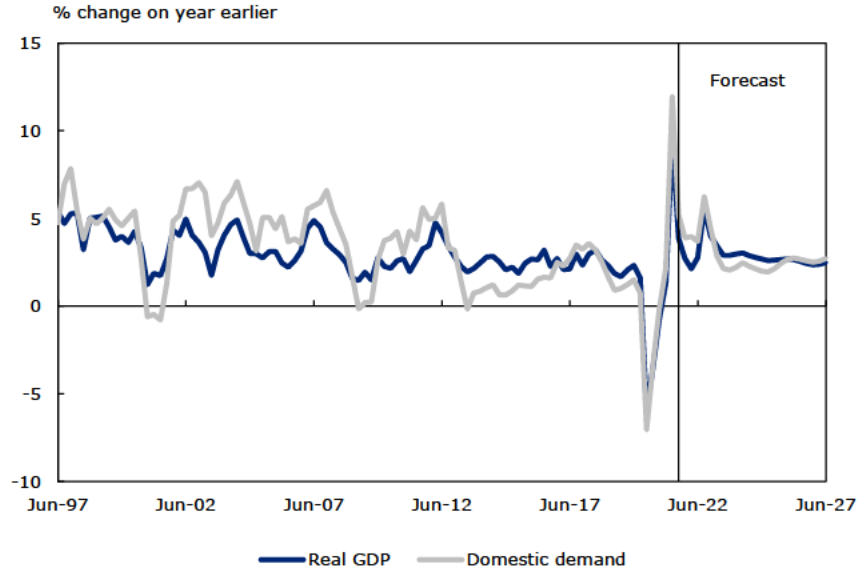
Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

The spread of Omicron did not disrupt the underlying strength of the labour market in early 2022. Despite a large fall in the number of hours worked in January, employment increased by around 13,000 as businesses believed that the outbreak would be temporary. Overall, employment is 2.0% above the pre pandemic levels in February 2020, with the employment to population ratio at an all-time high. Looking ahead, the number of job advertisements in January 2022 is 63% above pre-COVID levels seen in February 2020.[3] This suggests that the labour market will continue to tighten in 2022 alongside the growth in the wider economy.

[3] National Skills Commission, *Vacancy Report* (16 February 2022) <https://lmip.gov.au/default.aspx?LMIP/GainInsights/VacancyReport>.

The public sector has played an important role throughout the pandemic, supporting consumers and businesses through large stimulus payments. While this stimulus has moderated recently, government infrastructure investment remains elevated. The value of public infrastructure projects under construction is forecast to surpass $310 billion in 2022, a 50% increase from current levels. The increase is almost entirely driven by transport infrastructure which is set to surpass one quarter of a trillion dollars in coming years.

Chart 2.2 Domestic demand and GDP

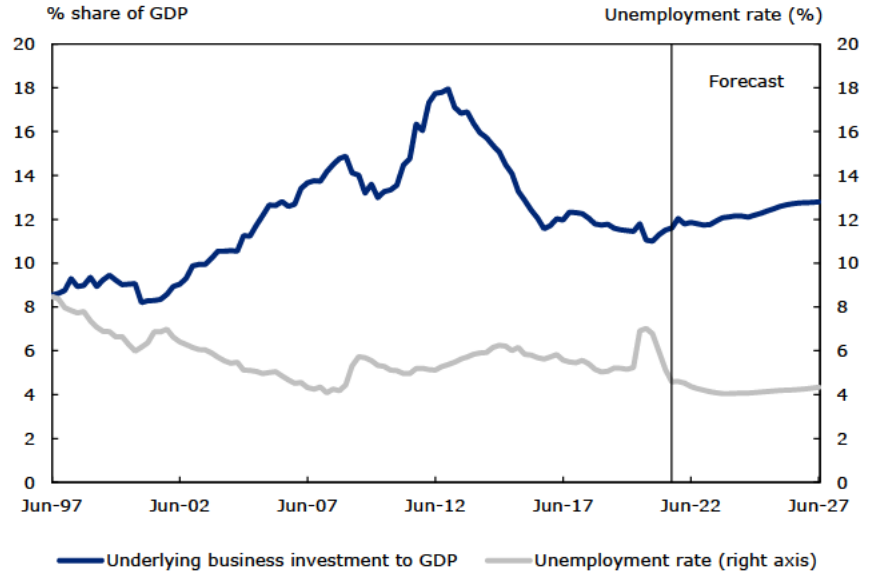


Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

Business investment returned to pre-COVID levels ahead of the Omicron outbreak, supported by government investment invectives, a strong share market and low interest rates. Business investment is forecast to grow despite pandemic uncertainty, geopolitical risks, and an expected rise in interest rates. Overall, business investment is forecast to grow by 5.2% in 2022 and 4.6% in 2023.

Over the medium-term, the pace of economic growth will increasingly depend on the demand for labour (the unemployment rate) and the demand for capital (the business investment rate). Both of these indicators are forecast to strengthen in 2022 (see Chart 2.3).

Chart 2.3 Business investment as a share of GDP and the unemployment rate



Source: ABS, Deloitte Access Economics.

The main risks to the outlook include an escalation of the conflict in Ukraine (affecting Australia via higher oil prices, increased volatility on global markets, and general apprehension from consumers and businesses); new variants of COVID that are more resistant to vaccines; and a slower than expected return of international tourists and students. The relatively low levels of vaccinations in many countries also makes the international economic outlook more uncertain and international trade and supply chains more vulnerable to disruption.

Although the outlook is subject to a high level of uncertainty, the Australian economy is well placed to recover in 2022. Growth over the next two years is set to be underpinned by private consumption, private business investment and exports. The absence of harsh restrictions and increased vaccination rates suggests that the Australian economy will be more resilient and its recovery more sustainable compared with previous years. Overall, real gross domestic product (GDP) is forecast to grow by 2.9% in 2021-22 before accelerating to 4.0% in 2022-23 and settling to 2.9% in 2023-24.

2.1.2 Utilities

The 'utilities' industry is the broad term applying to the electricity, gas, water and waste services industry, which is Division D of the Australian and New Zealand Standard Industrial Classification (ANZSIC). The industry covers activity in the provision of electricity, gas through mains systems, water, drainage and sewage services.

Utilities industry output increased by 0.3% over 2021. Activity fell in the electricity supply (-0.7%) sub-industry but rose in the water supply and waste services (1.6%) sub-industry, together these account for more than 95% of industry output. Elsewhere, output in the gas supply sub-industry was flat over 2021.

Average operational demand in the National Electricity Market (NEM) fell by 2.3% over the year to the December quarter of 2021 – reaching the lowest fourth quarter average since 2005 (when Tasmania joined the NEM). This was driven by a sharp increase in solar photovoltaic (PV) generation that contributed to large reductions in daytime demand, which more than offset the increase in underlying demand for grid-supplied electricity.

From 1 October 2021, the NEM transitioned from 30-minute to five-minute settlement periods for the electricity spot price. This has seen a reduction in instances of prices regularly falling below the market price floor (-$1,000 per megawatt hour (MWh)). Despite this, negative and zero spot prices occurred 11.2% of the time through 2021, up from 4.9% of the time in 2020. This trend has

been driven by reduced daytime demand amid mild weather conditions and high solar PV output, elevated grid-scale renewable energy generation and interconnector constraints.

The closure of the 2.9-megawatt (MW) Eraring coal-fired power station has been brought forward from 2032 to 2025. Origin Energy cited the rapid transition towards less carbon-intensive forms of energy generation in the NEM as a key driver of the decision.[4] There is scope for the closure of other coal assets to be brought forward.

AGL Energy received a non-binding indicative offer to acquire 100% of its shares from Brookfield and Grok Ventures (the private investment company of Mike and Annie Cannon-Brookes) in February 2022. The consortium announced an intention for AGL to reach net zero emissions by 2035, with 7 gigawatts (GW) of existing capacity expected to be replaced with 8 GW of clean energy and storage. The AGL board has rejected the initial bid and a second improved bid.[5,6]

The faster than previously expected retirement of existing generation assets has raised concerns around reliability in the NEM and potential price impacts for consumers. It is likely that planned generation capacity will be sufficient to meet the Energy Security Target at the time that the Eraring power station closes. A comprehensive review is being undertaken by the Australian Energy Market Operator (AEMO) as part of the 2022 Electricity Statement of Opportunities.

Looking ahead, AEMO forecasts NEM consumption to decline over the next five years.[7] Higher demand from a growing population and economy is expected to be offset by the increased use of distributed energy technologies (such as rooftop PV, battery storage and other small-scale generation resources), improvements in energy efficiency, as well as stronger growth in less energy-intensive industries compared to more energy-intensive industries such as manufacturing.

In the December quarter of 2021, average wholesale electricity prices fell by approximately 13% from the prior quarter amid further growth in variable renewable energy supply. However, prices remain elevated compared to a year earlier due to some limitations in transfers from cheaper to more expensive regions and a decline in some lower priced black coal generation. Electricity price volatility has also continued to rise, reaching its highest December quarter level since 2009.

The electricity industry faces a number of downside risks over the medium term:

- The transition from a centralised fossil fuel-led generation mix to a more decentralised and varied generation mix may produce costs for businesses and consumers in the NEM.
- The accelerated exit of fossil-fuel (in particular coal powered) generation and decreasing reliability of coal plants could increase supply scarcity risk.
- Greater uptake of distributed energy resources such as rooftop PV and battery storage systems will weigh on NEM electricity demand.

There are also a number of upside risks that may support growth:

- An acceleration in the uptake of electric vehicles could increase NEM electricity demand. According to AEMO this will depend on government policies, electric vehicle costs relative to non-electric vehicles, other transport alternatives (e.g. public transport), commercial demand, access to charging infrastructure and the availability of car models in Australia.

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[4] Origin Energy, *Origin proposes to accelerate exit from coal-fired generation* (17 February 2022) <https://www.originenergy.com.au/about/investors-media/origin-proposes-to-accelerate-exit-from-coal-fired-generation/>.
[5] Brookfield and Grok Ventures, *Brookfield & Grok Ventures proposal to acquire 100% of AGL* (21 February 2022) <https://bep.brookfield.com/sites/bep-brookfield-ir/files/consortium-proposal-for-agl-media-release-210222.pdf>.
[6] AGL, *Board rejects revised unsolicited non-binding indicative proposal* (7 March 2022) <https://www.agl.com.au/content/dam/digital/agl/documents/about-agl/media-centre/2022/220307-board-rejects-revised-unsolicited-non-binding-proposal.pdf>.
[7] Australian Energy Market Operator, *2021 Electricity Statement of Opportunities August 2021* (31 August 2021) <https://www.aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/nem_esoo/2021/2021-nem-esoo.pdf?la=en>.

- There is also the potential for higher demand from the business sector as industries undergo electrification. This includes demand from the manufacturing, mining, transport and services industries.
- Technological change could mean the cost of renewable energy continues to fall, helping to boost investment and uptake. The CSIRO has estimated that the cost of large-scale solar PV will reduce by almost 50% by 2040 (from 2020 levels). Meanwhile battery costs could fall by up to 50% across the same period as battery manufacturing increases to meet increased demand.[8]

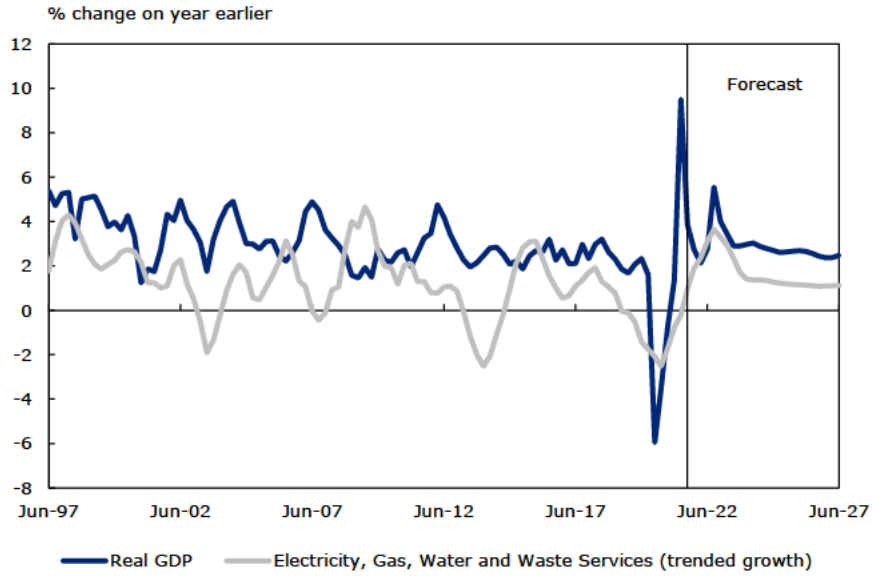
Overall gas demand fell by 1% from December 2020 to December 2021. The fall was mostly driven by a decrease in gas powered generation demand, while Queensland liquified natural gas (LNG) exports were flat over the year.

Average wholesale gas prices remained near record highs across east coast gas markets in the December quarter of 2021. The record prices reflect some periods of cold weather and supply issues at a Victorian gas plant.

According to the AEMO 2021 Gas Statement of Opportunities, the supply of gas from existing and committed developments is expected to meet demand from eastern and south-eastern Australia until 2026.[9]

Looking ahead, utilities industry output is forecast to grow by 3.8% in 2022, compared to a gain of 3.6% for the wider economy. The outperformance of the utilities industry is driven by the lockdowns in 2021, which negatively affected growth for industries such as tourism, the arts and education proportionally more than the utilities industry. Utilities industry output is then forecast to grow by 1.7% in 2022-23 compared to a 3.1% gain in the wider economy.

Chart 2.4 Utilities industry output and GDP

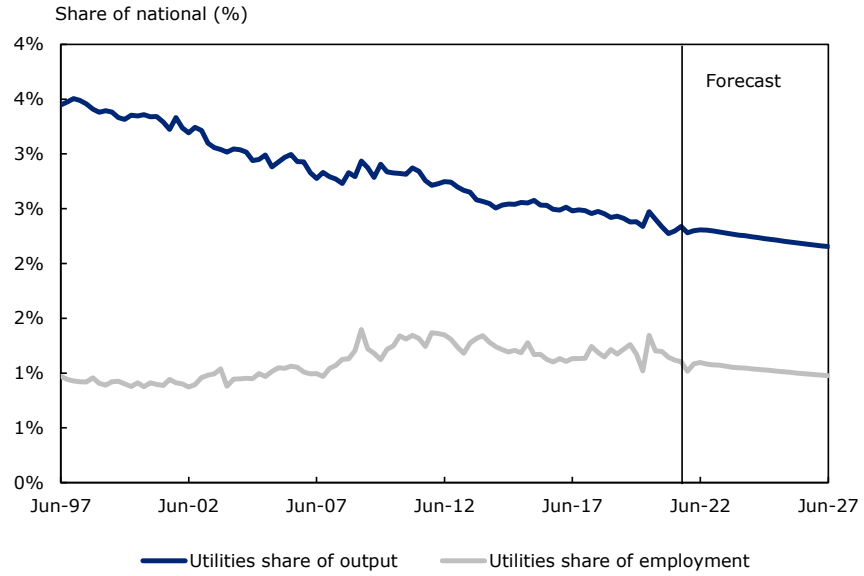


Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

[8] Australian Energy Regulator, *2021 State of the Energy Market* (2 July 2021), <https://www.aer.gov.au/publications/state-of-the-energy-market-reports/state-of-the-energy-market-2021>
[9] Australian Energy Market Operator, *2021 Gas Statement of Opportunities* (29 March 2021) <https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2021/2021-gas-statement-of-opportunities.pdf?la=en>.

Utilities industry output is forecast to remain weaker than growth in the Australian economy across the forecast period to 2026-27. As a result, the utilities industry is forecast to fall as a share of national output and employment over time (see Chart 2.5).

Chart 2.5 Utilities share of national output and employment



Source: ABS, Deloitte Access Economics.

2.2 The outlook for wages

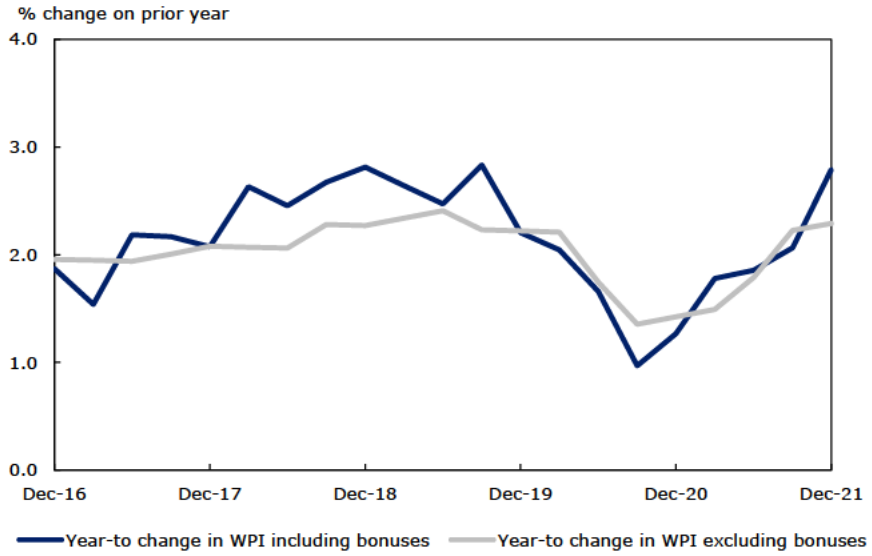
2.2.1 All industries

The Wage Price Index (WPI) grew 0.6% in the December quarter of 2021, with annual growth (i.e. calendar year 2021 over calendar year 2020) reaching 2.0%. The rate of annual wage growth increased from 1.7% in the September quarter as the economy rebounded from Delta lockdowns, boosting labour demand at a time when the supply of workers remained constrained.

Many firms are responding to labour shortages by offering a range of measures that do not add to base wages. This includes bonuses, flexible work arrangements, training and hiring staff with less experience.[10] This has seen the WPI including bonuses grow by 2.8% over the year (i.e. December quarter 2021 over December quarter 2020), compared to the 2.3% gain in the WPI excluding bonuses (see Chart 2.6).

[10] Reserve Bank of Australia, *Statement on Monetary Policy – February 2022* (3 February 2022) <https://www.rba.gov.au/publications/smp/2022/feb/ />.

Chart 2.6 WPI growth, including and excluding bonuses



Source: ABS.

The increase was larger for the private sector WPI including bonuses (3.0% in 2021) as firms looked to retain experienced staff and attract workers. Jobs covered by individual arrangements – which tend to be responsive to tightening labour market conditions – drove a significant portion of wage growth compared to usual December quarters. There was also an increase in the number of wage and salary reviews in the December quarter of 2021.

The December quarter also saw the final phase of award wage increases from the 2021-22 Fair Work Commission's (FWC) Annual Wage Review. The FWC staggered the award wage increases across several quarters in 2021-22 amid the impact of COVID. There were 21 awards which increased in the December quarter of 2021.

The WPI for the public sector increased 0.7% in the December quarter of 2021, slightly above the 0.6% increase in the private sector WPI. Public sector wages growth in the quarter was supported by the implementation of state-based public sector enterprise agreements and return to a more regular schedule of pay rises following wage freezes during the pandemic.

The retail trade industry WPI grew 1.2% in the December quarter of 2021, the fastest quarterly gain for any industry since the September quarter of 2015. Annual wage gains were fastest in the professional services (2.5%) and accommodation and food services industries (2.3%) driven by the impact of strong demand for labour and FWC annual wage increases respectively. The slowest annual wage gains were in the arts and recreation (1.3%) and utilities industries (1.4%).

Wage gains are forecast to accelerate from 2021-22 alongside the recovery in the Australian economy, an increase in Consumer Price Index (CPI) inflation and inflation expectations, employees switching jobs to take advantage of greater bargaining power, and employers turning to increases in base pay rather than bonuses to attract staff.

However, there are a number of factors that may limit the pace of wage gains in the coming years:

- The structural increase in underemployment over recent decades could mean that there is additional spare capacity in the labour market that needs to be absorbed before wages rise. Therefore, the unemployment rate may have to fall by more than it previously has before there is sustained upward pressure on wages.
- The wage-setting process – including multi-year enterprise agreements and annual award wage increases – also leads to some inertia in overall wage growth that may limit the pace of short term gains.

- The easing of international border restrictions is likely to increase the number of foreign workers in Australia, placing downward pressure on wages in certain industries.
- Trends such as automation of work processes, an increase in contract work, and competitive pressures from the internationalisation of services trade have all combined to restrain workers' bargaining power. It is possible that these trends are making workers feel less secure about their future employment and less likely to push for larger pay rises.
- The returns to technological developments, which are increasingly focused on intangible capital goods such as software and IT, tend to be highly concentrated in a few firms across a small number of industries. Firms that are unable to innovate and take advantage of new technologies are often choosing to control costs as a way of remaining competitive. This cost-control approach can sit at odds with paying higher wages to employees.
- Scheduled increases in the superannuation guarantee rate across coming years which the Reserve Bank of Australia (RBA) estimates will reduce WPI growth relative to broader measures of earnings.

Looking ahead, Deloitte Access Economics forecasts nominal wage growth of 2.3% in 2021-22 and 2.5% in 2022-23. The pace of wage gains is forecast to accelerate over the medium term, reaching 2.9% in 2026-27.

Chart 2.7 National WPI forecasts

Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

Real wages (or nominal wages adjusted for inflation) are forecast to fall 1.2% in 2021-22 as CPI growth of 3.5% outpaces wage growth of 2.3%. An easing of CPI inflation should see real wages remain flat in 2022-23. Real wage growth is forecast to increase gradually to reach 0.6% by 2026-27.

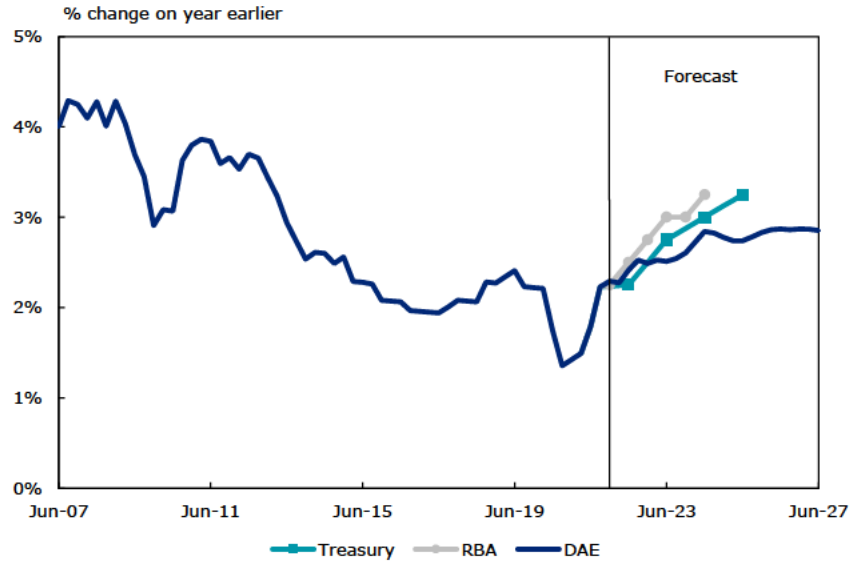
Compared with the forecasts presented in Report 3B, the current forecasts have stronger nominal wage growth in the short and medium term.[11] This reflects the combination of an acceleration in the economic recovery, wage pressures in particular industries and the faster than anticipated increase in CPI inflation. Nominal wage growth has been revised higher by a cumulative 1.1 percentage points across the period from 2021-22 to 2026-27.

[11] Report 3B was finalised in November 2021 and included a September 2021 last actual for WPI. The forecast period was 2020-21 to 2026-27.

However, the higher inflation forecasts mean that real wages have been revised downwards by a cumulative 0.9 percentage points from 2021-22 to 2026-27 compared to Report 3B. This mainly reflects higher CPI inflation forecast in 2021-22 and 2022-23 reducing real wages in those years. Real wage growth has been revised higher by a cumulative 0.5 percentage points across the forecast period from 2023-24 to 2026-27.

By way of benchmarking, Deloitte Access Economics forecasts (December 2021 last WPI actual) a similar pace of wage growth over the short term compared to the latest forecasts released by the RBA in its February 2022 *Statement of Monetary Policy* (September 2021 last WPI actual) and Commonwealth Treasury forecasts published in the *2021-22 Mid-Year Economic and Fiscal Outlook (MYEFO)* released in December 2021 (September 2021 last WPI actual). However, Deloitte Access Economics forecasts begin to diverge around mid-2023, with the pace of wage growth expected to slow relative to the other forecasts.

Chart 2.8 Comparison of national WPI forecasts by forecaster



Note: Markers indicate provided forecast, remaining data points have been imputed. Series are 'year-to' not 'year-average' growth rates.
Source: Mid-Year Economic and Fiscal Outlook 2021-22, Deloitte Access Economics, RBA February 2022 Statement of Monetary Policy.

Table 2.1 National wage forecasts

Financial year nominal wages forecasts

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Wage price index	1.5	2.3	2.5	2.7	2.8	2.8	2.9
Average weekly earnings	1.6	2.2	3.5	3.1	3.1	3.1	3.1
Ordinary time earnings	2.7	2.3	4.3	4.0	3.7	3.7	3.7
Unit labour costs	0.1	5.8	2.6	3.0	3.1	3.1	2.8

Financial year real wages forecasts

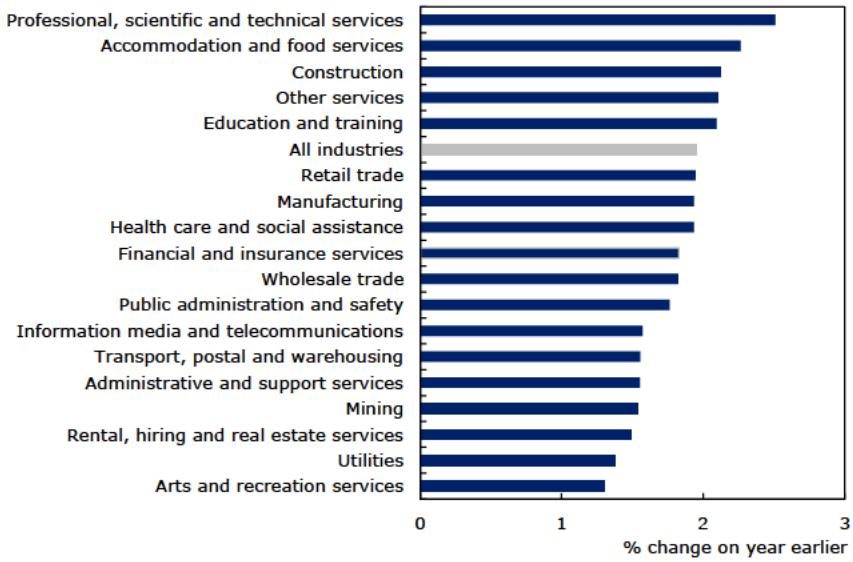
	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Wage price index	-0.1	-1.2	0.0	0.4	0.5	0.5	0.6
Average weekly earnings	0.0	-1.2	1.0	0.9	0.8	0.7	0.8
Ordinary time earnings	1.0	-1.2	1.7	1.7	1.4	1.3	1.4
Unit labour costs	-1.6	2.2	0.1	0.7	0.8	0.7	0.5

Source: ABS, Deloitte Access Economics.

2.2.2 Utilities industry wages

Utilities industry wages grew 0.6% in the December quarter of 2021 to be 1.4% higher in 2021. This compares to the 2.0% gain in all industry wages over the same period, with the utilities industry experiencing the second slowest growth of any industry in 2021.

Chart 2.9 Wage Price Index growth by industry, % change on year earlier, December 2021

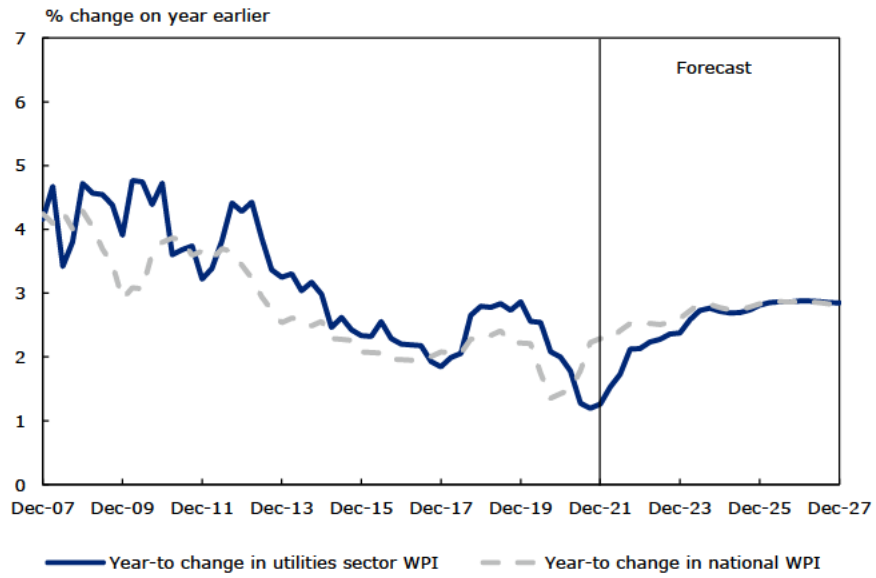


Source: ABS, Deloitte Access Economics.

Utilities industry wage gains have fallen from a peak of 2.8% in 2019, with falls across both the private and public sectors. Private sector utilities wages have slowed from an annual growth rate of 3.1% in 2019 to 1.6% in 2021, while public sector wages have slowed from 2.5% to 1.1% over the same period.

Utilities industry wage growth outpaced wage growth for the overall economy for much of the past decade. However, the recent slowdown has meant that wage gains in the utilities industry are now below that of the broader economy (see Chart 2.10).

Chart 2.10 National utilities industry Wage Price Index forecasts



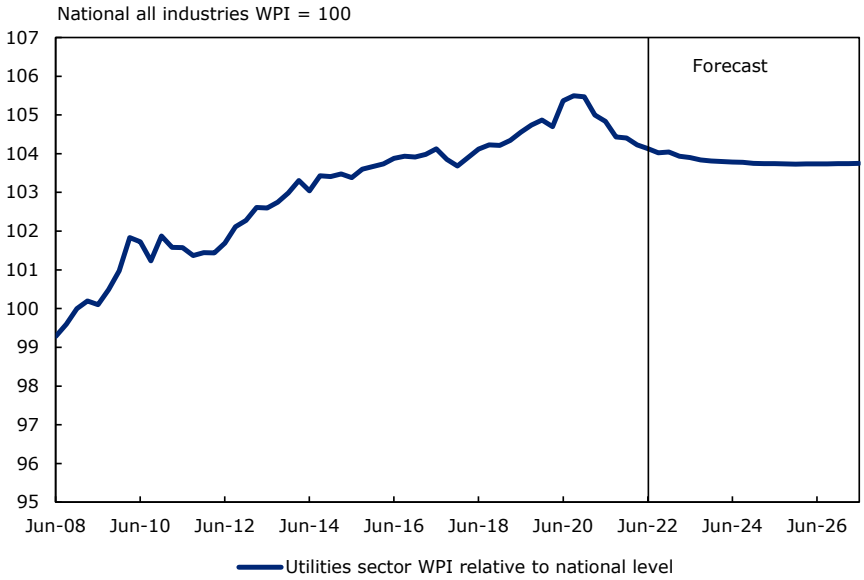
Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

There are a number of potential explanations for the recent slowdown of utilities wages relative to the 'all industry' average:

- Utilities employment fell by 4.9% in 2021, adding to spare capacity in the utilities industry at a time when all industry employment grew by 3.0%.
- Utilities industry output increased by 0.3% in 2021, compared to a 4.7% rise in output across the wider economy.
- The strong rebound in economic activity in industries that have been hardest hit by the pandemic (such as accommodation and food services) has supported labour demand in those industries.
- International border closures have restricted an important source of labour supply for many industries including professional services and construction, placing upward pressure on wages.
- Output in the mining industry fell 1.1% in 2021. The mining industry traditionally competes with the utilities industry for labour, meaning that weakness in the mining industry could limit upward pressure on utilities wages.

The utilities industry nominal WPI is forecast to grow by 1.4% in 2021-22, increasing to 2.2% in 2022-23 before reaching 2.9% in 2026-27. Utilities wages are forecast to grow at a marginally slower rate than wages across the wider Australian economy over the medium term. This reflects the fact that utilities output is forecast to grow at a compound annual growth rate (CAGR) of 1.7% from 2020-21 to 2026-27 compared to a CAGR of 2.9% in the wider Australian economy.

Chart 2.11 Utilities Wage Price Index relative to National Wage Price Index



Source: ABS, Deloitte Access Economics.

Real wages in the utilities industry are forecast to fall 2.0% in 2021-22 as inflation outpaces nominal wage growth. Real wage gains are forecast to fall 0.3% in 2022-23 reflecting upward pressure on nominal wages and a moderation in CPI inflation. Real wages are forecast to gradually increase thereafter, reaching 0.6% by 2026-27.

Forecasts for utilities industry nominal WPI growth have been revised higher from 2021-22 to 2026-27 compared to the forecasts in Report 3B. Utilities wage growth has been revised up by a cumulative 1.2 percentage points across the forecast period. This is primarily due to the faster than expected recovery in the Australian economy and CPI inflation.

Utilities industry real WPI growth has been revised down by 1.0 percentage points in 2021-22 and 0.5 percentage points in 2022-23, as upward revisions to CPI inflation outweigh upward revisions to

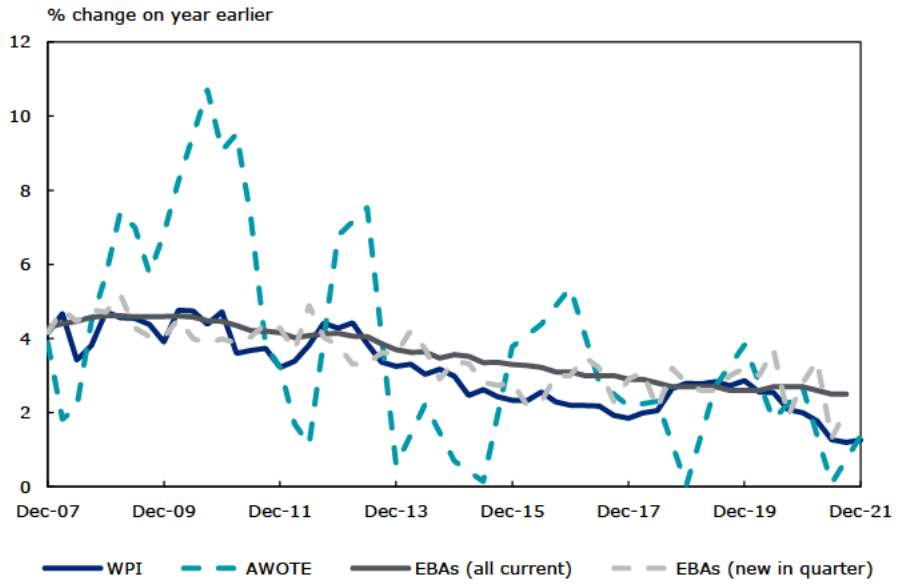
nominal wages. Utilities industry real WPI growth has been revised up by a cumulative 0.7 percentage points from 2023-24 to 2026-27 as wage gains are expected to catch-up to CPI inflation.

2.2.2.2 Comparison with results from other wage growth measures

Chart 2.12 shows that, despite volatility in Average Weekly Ordinary Time Earnings (AWOTE), the downward trend in utilities WPI from 2006 to 2018 and from 2020 has been mirrored by several other wage growth measures that are produced on a regular basis.

These include Enterprise Bargaining Agreements (EBAs) sourced from the *Trends in Federal Enterprise Bargaining* publication produced by the Attorney-General's Department.

Chart 2.12 Measures of utilities industry wage growth



Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Attorney-General's Department

The AWOTE series fluctuates considerably and is consequently limited in its use in forecasting wage growth. In the latest Average Weekly Earnings (AWE) publication released in February 2022, the ABS indicated that *"The purpose of the survey is to measure the level of average gross weekly earnings associated with employees. While AWE is not designed to produce movement in earnings data, the frequency of collection supports a time series of these level estimates".* Data on the average level of earnings is useful for comparing what an individual earns relative to the average. It is therefore used in the Deloitte Access Economics wage price model as an indicator only.

The utilities EBA data provides a good partial indicator of the future trend growth in the utilities WPI measure. Deloitte Access Economics considers EBA data in forecasting WPI, but it is not the primary driver.

As at the September quarter of 2021, there were 334 EBAs active in the utilities industry, covering some 39,800 employees – approximately 30% of total utilities industry employees. The Average Annualised Wage Increase (AAWI) across all current utilities EBAs was 2.5% in the September quarter of 2021, below the 2.7% AAWI seen a year earlier.

A total of 37 new EBAs, covering 4,000 employees, were lodged in the September quarter of 2021. The AAWI for new EBAs in the September quarter of 2021 was 1.3%, above the 1.3% AAWI for new EBAs in the June quarter of 2021 but below the 3.4% for new EBAs in the March quarter of 2021.

A total of 96 EBAs (covering 6,500 employees) with an AAWI of 2.5% are due to expire from the December quarter of 2021 to the June quarter of 2022. This is expected to place downward pressure on the AAWI for all current EBAs and the broader utilities WPI.

2.2.3 Labour productivity

Labour productivity measures the number of units of output an individual employee can produce in a given time period. The more units of output each worker can produce, the fewer workers are required to create a given level of industry output.

In this report, Deloitte Access Economics provides estimates of labour productivity at the national, state and industry level. There are three different values that are utilised to calculate productivity measures used in this report:

1. 'National' productivity = gross domestic product / employed persons in Australia
2. 'State' productivity = gross state product / employed persons in that state
3. 'Industry' productivity = gross value added / employed persons in that industry in Australia

A detailed methodology discussion can be found in Report 1 provided to the AER in August 2020.

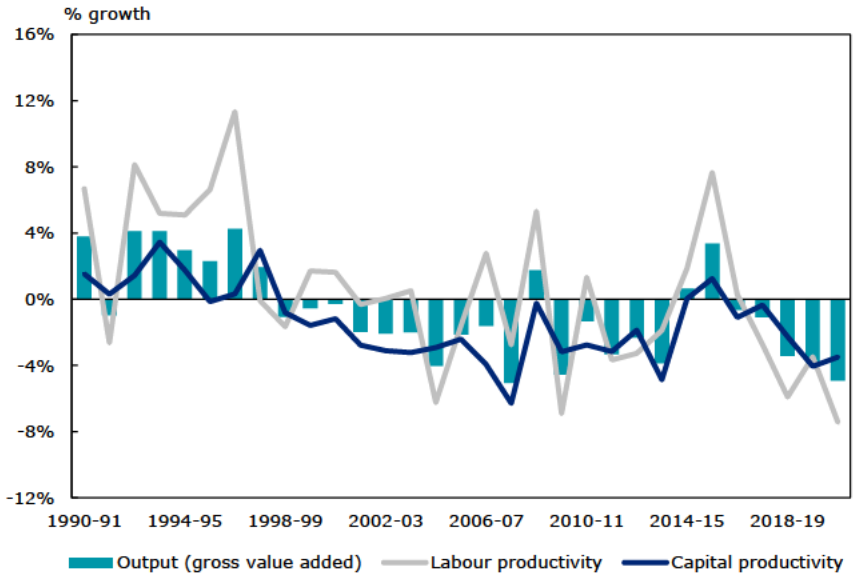
Historical estimates of labour productivity may differ from those presented in previous reports as the ABS has changed the reference year for chain volume measures in the December 2021 National Accounts (to 2019-20 from 2018-19).

Economy wide labour productivity increased in 2020-21 as COVID saw labour reallocated from low productivity industries to higher productivity industries.[12] While most industries saw both output and labour inputs fall, labour productivity outcomes varied. Industries that saw labour productivity increases tended to have large falls in hours worked and relatively small declines in output.

Labour productivity in the utilities industry increased in 2020-21 as employment fell by 2.2%, compared to a 1.2% decline in output. Labour productivity in the utilities industry has largely grown at a slower rate than productivity across the wider economy over the last two decades. Utilities industry labour productivity fell by a CAGR of 1.3% from 1999-00 to 2020-21, weighing on overall output in the utilities industry (see Chart 2.13).

[12] Productivity Commission, *PC Productivity Insights: Recent Developments* (17 June 2021) <https://www.pc.gov.au/research/ongoing/productivity-insights/recent-developments-2021>.

Chart 2.13 Measures of utilities industry productivity



Source: ABS, Deloitte Access Economics

Analysis from the Productivity Commission found that falling productivity growth has been due to an increase in the ratio of peak to average electricity demand (which lowered rates of capacity utilisation), investment in capital assets (which temporarily increased inputs prior to growth in output), undergrounding electricity cabling (which raised costs and quality of service but not the volume of output) and a policy shift in favour of cleaner energy generation (which were initially higher-cost forms of generation).

According to the ABS, industry productivity trends have been especially difficult to interpret in recent years. *"This is because productivity measures include a number of drivers including technical change, scale and cyclical effects which are difficult to separately identify. The COVID-19 pandemic has compounded this issue, as it has had varying impacts on productivity estimates for 2019-20. Care should be taken when interpreting year-to-year productivity growth for the market sector and by industry."*[13]

Labour productivity in the utilities industry is forecast to grow by 0.8% in 2021-22, slightly above the 0.5% gain in all industry labour productivity. This is driven by a forecast fall in utilities employment (-5.6% in 2021-22) alongside a rise in utilities output (1.9%), while both Australian all industry employment (2.3%) and output (2.9%) are forecast to rise over the same period. Looking ahead, utilities labour productivity is forecast to grow by 2.2% in 2022-23 as the industry output and broader economy recovers from the effects of COVID. Utilities industry labour productivity is expected to closely track productivity in the wider economy over the medium term.

Table 2.2 Australian labour productivity forecasts

Financial year changes in labour productivity forecasts

	History	Forecast					
Annual % change	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**
All industries	0.9	0.5	2.3	1.6	1.4	1.4	1.1
Utilities	0.9	0.8	2.2	1.6	1.5	1.4	1.2

Source: ABS, Deloitte Access Economics.

[13] Australian Bureau of Statistics, *Estimates of Industry Multifactor Productivity, 2019-20*, cat. No. 5260.0.002 (30 November 2020).

2.2.4 Summary results

Table 2.3 National industry wage forecasts

Financial year changes in nominal national industry sector WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
All industries	1.5	2.3	2.5	2.7	2.8	2.8	2.9
Utilities	1.8	1.4	2.2	2.5	2.7	2.8	2.9

Financial year changes in real national industry sector WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
All industries	-0.1	-1.2	0.0	0.4	0.5	0.5	0.6
Utilities	0.2	-2.0	-0.3	0.2	0.4	0.4	0.6

Financial year changes in labour productivity forecasts

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
All industries	0.9	0.5	2.3	1.6	1.4	1.4	1.1
Utilities	0.9	0.8	2.2	1.6	1.5	1.4	1.2

Source: ABS, Deloitte Access Economics.

3 Victoria

3.1 Economic outlook

3.1.1 Overview

Victorian State Final demand (SFD) increased by 6.4% in 2021 as the economy recovered from extended lockdowns in 2020. High vaccination rates contributed to a relatively rapid easing of COVID restrictions in late 2021 following the Delta outbreak, with fewer restrictions imposed during the Omicron outbreak in early 2022 compared to prior outbreaks.

Victorian employment fell by 0.4% in the month to January 2022, while the number of hours worked fell by 13%. The spread of the Omicron variant led to many people isolating after contracting the virus or after being identified as close contacts. Despite this, there are 150,000 (or 4.5%) more people employed in Victoria compared to the low during the Delta lockdown in October 2021. The unemployment rate has fallen to 4.1% and the underemployment rate has fallen to 6.0%, below the equivalent national rates of 4.2% and 6.7% respectively. Forward looking indicators of labour demand are also strong, with job advertisements for January 2022 63% above pre-COVID levels seen in February 2020.[14]

Victorian economic activity is set to be underpinned by a recovery in private consumption in 2022. A robust labour market, increased household wealth during the COVID period, and a degree of pent-up demand are all expected to add to spending. As a result, Victorian private consumption is forecast to grow by 8.5% in 2022 before moderating to a gain of 5.7% in 2023.

Public sector investment is also forecast to add to growth in the Victorian economy. There are currently $44 billion worth of engineering projects underway in the state, with work also expected to begin on several large-scale transport projects in 2022 – including the $35 billion Suburban Rail Loop East and $15 billion North East Link.

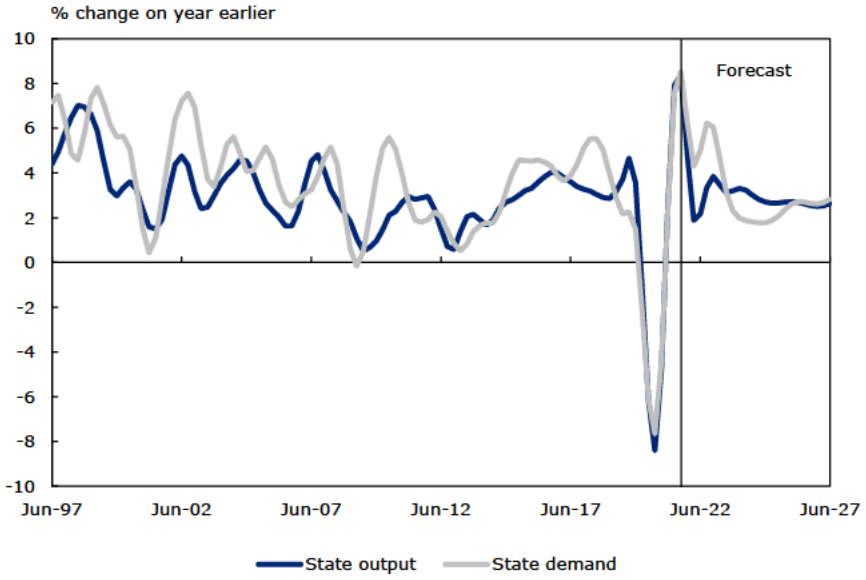
A key driver of the Victorian economy prior to the outbreak of COVID was strong population growth. The Victorian population grew at an average annual rate of 2.1% in the decade to 2019, compared to 1.6% growth in the wider Australian population. More than three fifths of the increase in the Victorian population over this period has been due to international and interstate migration. While international migration has been severely affected by the closure of international borders, extended lockdowns in the state have also seen net interstate migration turn negative as Victorians moved to states with fewer COVID infections. Net international migration is estimated to be -39,000 in 2021, while net interstate migration is -8,000. The easing of border restrictions is set to reverse this trend. International migration is forecast to add approximately 12,000 persons to the Victorian population in 2022 and 56,000 persons in 2023. Net interstate migration is forecast to add approximately 5,000 persons to the Victorian population in 2022 and 2023. Both international and interstate migration are expected to remain below pre-COVID peaks across the forecast period to 2027.

The easing of border restrictions is also set to drive a recovery in Victoria's relatively large services exports industry. There were 13,000 overseas arrivals to Victoria in December 2021, up from only 2,000 in December 2020. And while further gains are expected in 2022, it remains unclear when (or if) student and tourist numbers will return to pre-COVID levels. This is partly due to elevated geopolitical tensions, a degree of hesitancy among travellers, rising oil prices adding to the cost of air travel, as well as the widespread use of technology to deliver education during the pandemic.

[14] National Skills Commission, *Vacancy Report* (16 February 2022) <https://lmip.gov.au/default.aspx?LMIP/GainInsights/VacancyReport>

Deloitte Access Economics forecasts Victorian Gross State Product (GSP) to increase by 2.8% 2022 and 3.2% in 2023 amid strong growth in private consumption, private investment, and continued government spending. Output growth is forecast to moderate to a gain of 2.7% in 2027.

Chart 3.1 Victorian output and state final demand



Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

Table 3.1 Victorian economic forecasts

	History	Forecast					
Annual % change (unless noted)	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Consumption							
Private sector	4.7	8.5	5.7	2.9	2.7	2.9	3.3
Public sector	5.9	1.0	-0.4	-0.6	-0.3	1.5	2.1
Private sector investment							
Dwelling investment	1.8	1.9	-2.5	0.7	2.5	0.1	2.4
Non-residential building	-1.9	6.7	5.1	4.0	6.0	5.8	4.1
Engineering construction	10.0	7.2	-2.1	2.8	6.8	6.3	4.1
Machinery and equipment	22.6	11.0	5.1	3.6	5.0	4.5	2.6
IP and biological	7.8	6.3	4.1	7.3	6.0	6.0	4.6
Public investment							
General Government	18.6	-1.5	-7.3	-4.6	0.2	3.2	2.4
Public enterprises	-0.5	1.1	-2.2	1.9	2.5	2.2	1.6
Real final demand	6.1	5.5	2.9	1.8	2.2	2.7	3.0
Private sector	5.4	7.4	4.5	2.8	3.0	2.9	3.2
Public sector	7.8	0.5	-1.7	-1.2	-0.2	1.8	2.1
International trade							
Exports	-3.5	11.9	17.7	8.1	4.6	3.5	2.7
Imports	9.0	10.8	9.3	4.6	2.9	2.9	2.9
Gross state product	6.0	2.8	3.2	2.9	2.7	2.6	2.7
Employment	4.0	0.8	1.6	1.4	1.3	1.4	1.5
Unemployment rate (%)	4.8	4.4	4.0	4.0	4.0	4.1	4.2

Note: All variables (except for employment and the unemployment rate) expressed in inflation adjusted terms.
Source: ABS, Deloitte Access Economics.

3.1.1 Utilities

Victorian NEM average electricity demand fell to its lowest December quarter level on record in 2021. This was driven by an increase in distributed PV output that weighed heavily on grid-supplied electricity demand during the day in Victoria.[15] This more than offset an increase in underlying demand over the past year amid cooler weather conditions.

Average electricity prices fell to their lowest December quarter level since 2014. Reduced daytime demand from mild conditions meant that average spot prices were negative between 9:25am and 2:20pm, while the average price between 8:00am and 4:30pm was $0.1 per MWh. Overall spot prices were negative a record 24% of the time in the state. Electricity futures market indicate that Victorian electricity prices will remain subdued in 2022, with Victoria likely to have the lowest priced electricity of any state in the NEM.[16]

Victoria's utilities industry continues to transition towards less carbon-intensive forms of electricity generation. Renewable energy accounted for 29.4% of all electricity generated in Victoria in 2020-21, up from 24.3% in 2019-20.[17] Looking ahead, the Victorian Government is targeting 40% renewable energy generation by 2025 and 50% by 2030.

The AEMO expects up to 5 GW of additional renewable generation in Victoria will be needed to reach the 50% by 2030 target. This is expected to be delivered through a combination of distributed energy resources (including rooftop PV) and large-scale renewable projects.[18]

In 2020-21, 472 MW of large-scale wind and solar projects were connected in Victoria. The state now has 8.2 GW of large-scale wind and solar generation capacity, and a further 3.1 GW of rooftop PV. This equates to approximately 45% of existing and committed generation capacity in the state.

The increase in renewable energy generation is expected to offset the planned exit of coal-fired power stations over the coming decades. AEMO has noted that while some improvements to coal fired power plants are expected to be made, many generators could experience decreasing reliability in the longer term, potentially leading to supply risks.

The retirement of the coal powered Yallourn Power Station has already been brought forward by four years to 2028, which would withdraw 1.5 GW of generation capacity. A 350 MW large-scale battery project is expected to be built before Yallourn retires in an effort to reduce any potential reliability gaps.[19] Further out, the closure of the Loy Yang A coal plant has been moved from 2048 to between 2040 and 2045.

The Victorian Government is also investing in battery storage capacity. Victoria's Big Battery, a 300 MW battery storage project, came online in 2021 and will increase the capability of the interconnector between Victoria and New South Wales.

Overall, AEMO expects that grid-supplied electricity demand growth will remain subdued over the decade to 2030-31 amid continued growth in rooftop PV, energy efficiency improvements and a moderate reduction in business demand. However, there is likely to be upward pressure on electricity demand from continued growth in the population, the electrification of transport, as well as a shift away from gas heating.

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[15] Australian Energy Market Operator, *Quarterly Energy Dynamics Q4 2021* (28 January 2022) <https://aemo.com.au/-/media/files/major-publications/qed/2021/q4-report.pdf?la=en>.
[16] Ibid
[17] Victorian Government Department of Environment, Land, Water and Planning, *Victorian Renewable Energy Target 2020/21 Progress Report* <https://parliament.vic.gov.au/file_uploads/VRET_2020-21_Progress_Report_xssr5nBs.pdf>.
[18] Australian Energy Market Operator, *Victorian Annual Planning Report* (29 October 2021) <https://aemo.com.au/en/library/major-publications >.
[19] Australian Energy Market Operator, *2021 Electricity Statement of Opportunities August 2021* (31 August 2021) <https://www.aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/nem_esoo/2021/2021-nem-esoo.pdf?la=en>.

3.2 Outlook for wages

3.2.1 All industries

The Victorian WPI grew 0.5% in the December quarter of 2021, the equal slowest quarterly growth rate of any state or territory. This is partly due to the strength of the September quarter of 2021 where the Victorian economy exited lockdown and the WPI increased by 0.9%. The Victorian WPI grew by 2.0% in 2021, in-line with growth in the Australian WPI.

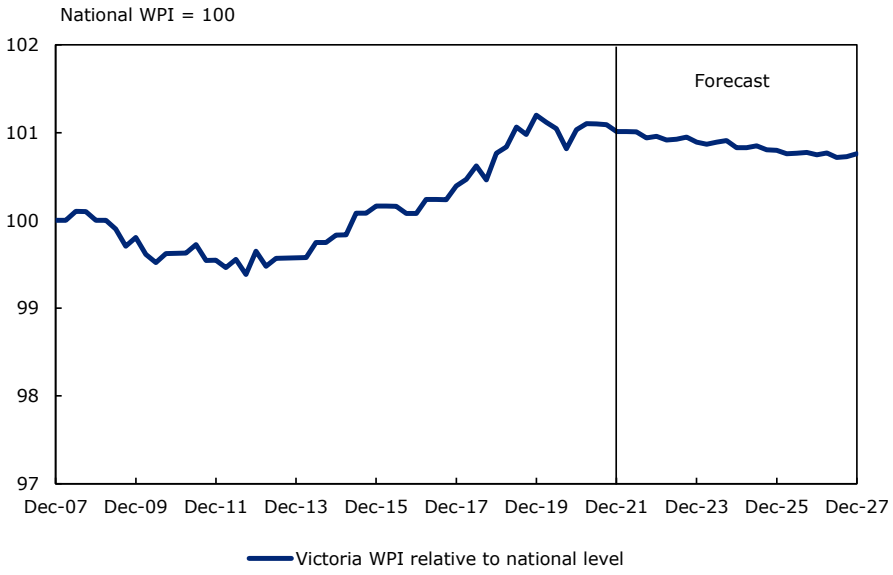
Private and public sector wages both grew by 0.5% in the December quarter of 2021, but private sector wages have grown at a faster rate (2.1%) in 2021 compared to public sector wages (1.9%). Among industries where data is available, wage gains in 2021 were fastest in the professional services (2.7%), public administration (2.3%) and health (2.3%) industries. Wage gains were slowest in the admin and support services (1.3%), retail trade (1.6%) and IT (1.7%) industries.

The Victorian WPI has grown by 3.6% since the outbreak of COVID (from the December quarter of 2019 to the December quarter of 2021). This is slightly below the 3.7% gain seen across Australia and reflects the extended periods of lockdown in Victoria relative to other states and territories, as well as the Victorian economy's exposure to industries disrupted by international border restrictions such as education.

This reverses a pre-COVID trend where the Victorian WPI grew at a faster rate than the Australian WPI. Much of that gain was due to elevated rates of population growth in Victoria which generated broad-based gains in the Victorian economy. The closure of the international border from March 2020 to February 2022 saw that relative strength start to fade.

The Victorian WPI is forecast to fall relative to the Australian WPI over the forecast period to 2027 (see Chart 3.2). This is largely due to a moderation in the outperformance of the Victorian economy amid slower forecast rates of population growth following strong growth in previous decades.

Chart 3.2 Victorian WPI relative to national WPI

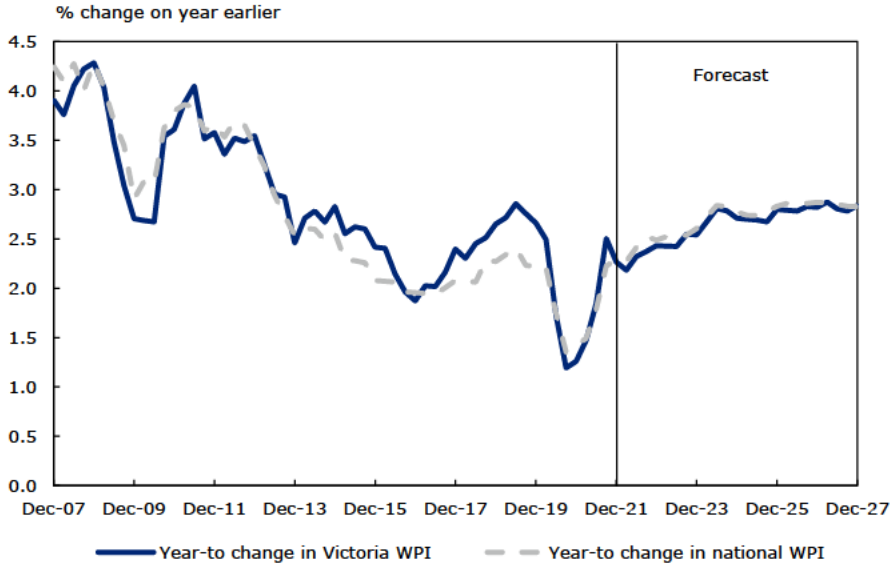


Source: ABS, Deloitte Access Economics.

The Victorian all industry nominal WPI is forecast to grow by 2.3% in 2022 and 2.5% in 2023 before accelerating to a gain of 2.8% in 2027. These forecasts represent a faster rate of growth from 2021 to 2026 when compared to those in Report 3B. Nominal wage growth is 1.0 percentage points higher in cumulative terms across the forecast period from 2022 to 2027.

Victorian real wages are forecast to fall 1.0% in 2022 as a 3.4% increase in the Melbourne CPI outweighs a 2.3% increase in nominal wages. Real wages are forecast to grow by 0.2% in 2023 before reaching 0.6% by 2027. Real wage growth is forecast to be 1.4 percentage points lower than Report 3B in 2022, 0.1 percentage points lower in 2023, but a cumulative 0.7 percentage points higher from 2024 to 2027.

Chart 3.3 Victorian all industry WPI growth



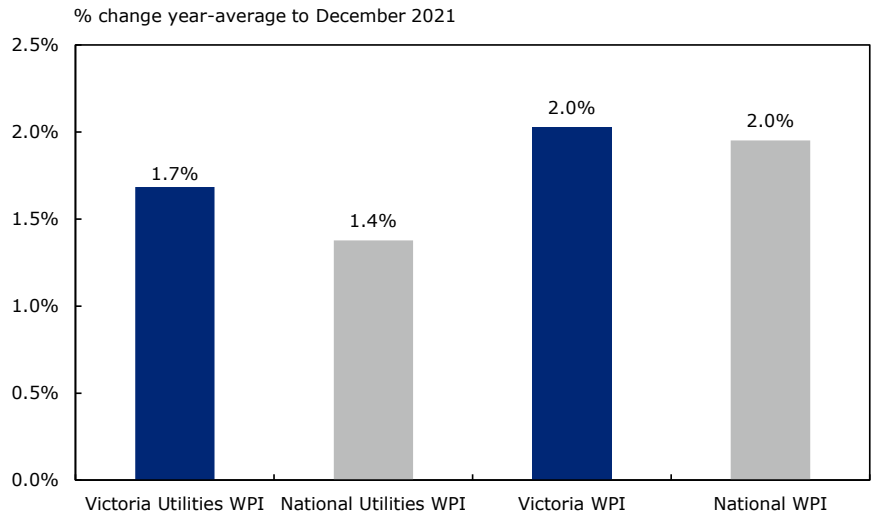
Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

3.2.2 Utilities industry wages

Victoria is Australia's second-most populous state and comprises a substantial share of national utilities output. Therefore, Victorian and national utilities industry wages often follow similar trends. However, at the state level, there may be greater volatility in utilities output, particularly over the short term.

Wages in the Victorian utilities industry grew by 1.7% in 2021, above the 1.4% gain in Australian utilities wages. This has been partly due to the timing of the recovery in the Victorian utilities industry, as well as the faster AAWI seen in current Victorian utilities EBAs (2.7%) compared to the national equivalent (2.5%). Despite this, Victorian utilities wages grew at a slower pace compared to all industry wages in both Victoria and Australia – at 2.0% in 2021 (see Chart 3.4).

Chart 3.4 Comparative WPI annual growth rates

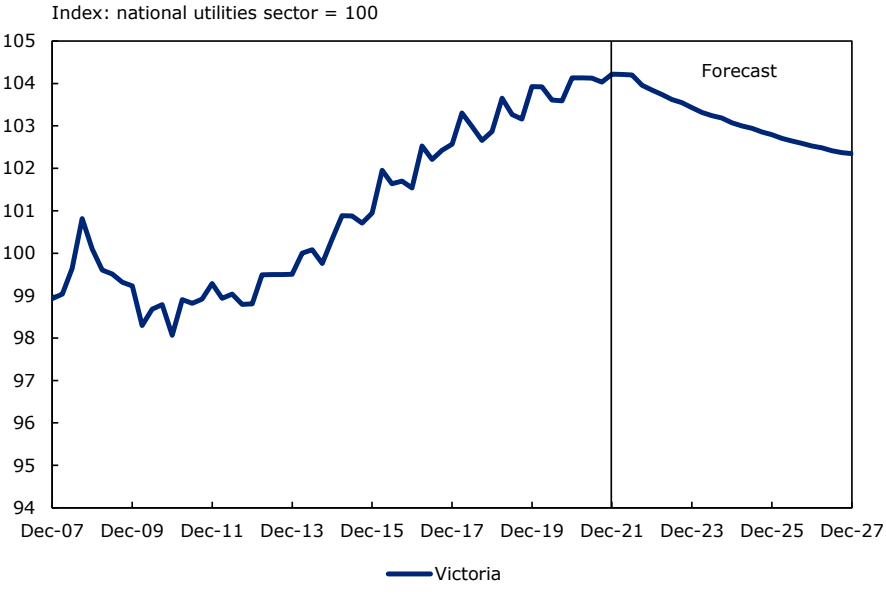


Source: ABS, Deloitte Access Economics.

The Victorian utilities industry WPI has increased relative to the national utilities industry WPI over the past decade (Chart 3.5). This partly reflects the stronger population growth in the state which has driven demand for utilities industry output as well as conditions in industries that compete with the utilities industry for workers, including the construction industry.

The Victorian utilities industry WPI is expected to fall relative to the national utilities industry WPI. This reflects forecasts for modest growth in Victorian utilities industry output compared to Australian utilities output. This follows the slowdown in Victorian population growth prior to the outbreak of COVID, as well as the proportionally large impact of international border restrictions from March 2020 to February 2022 on rates of population growth in Victoria compared to Australia.

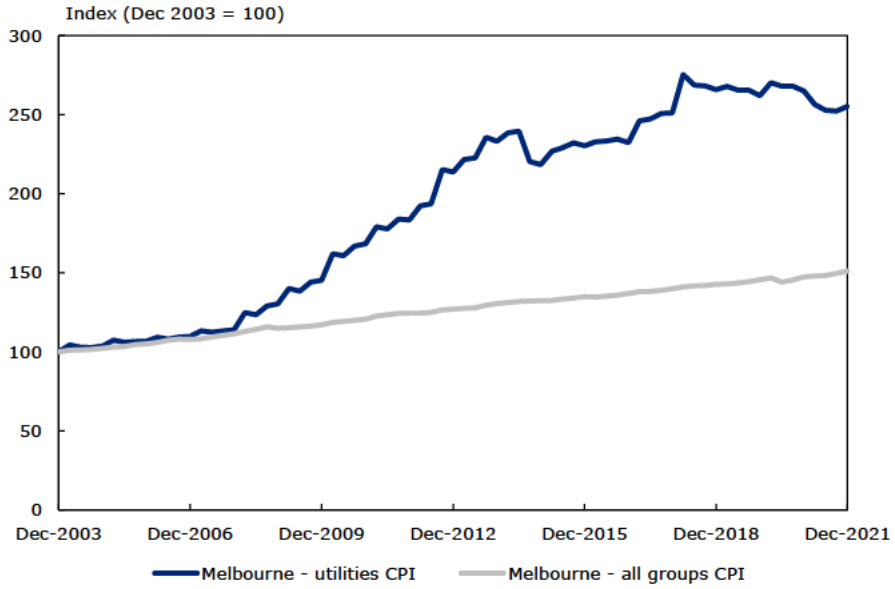
Chart 3.5 Victorian utilities WPI relative to national utilities WPI



Source: ABS, Deloitte Access Economics.

Melbourne utilities prices increased in line with the broader CPI until 2008. The Melbourne utilities CPI then grew at a CAGR of 12.4% from 2007 to 2013 compared to a 2.7% CAGR in the broader Melbourne CPI (see Chart 3.6). More recently, the Melbourne utilities CPI fell by 5.1% in 2021 compared to a 2.3% rise in the broader Melbourne CPI. This partly reflects a slowdown in wholesale electricity prices amid the continued rollout of rooftop PV generation which has reduced demand for grid-supplied electricity. Despite this, utilities prices remain well above the broader CPI. Looking ahead, the Australian Energy Market Commission (AEMC) expects annual residential electricity bills to decline by 7.7% from 2021 to 2024, driven primarily by lower wholesale costs.[20]

Chart 3.6 Melbourne utility prices



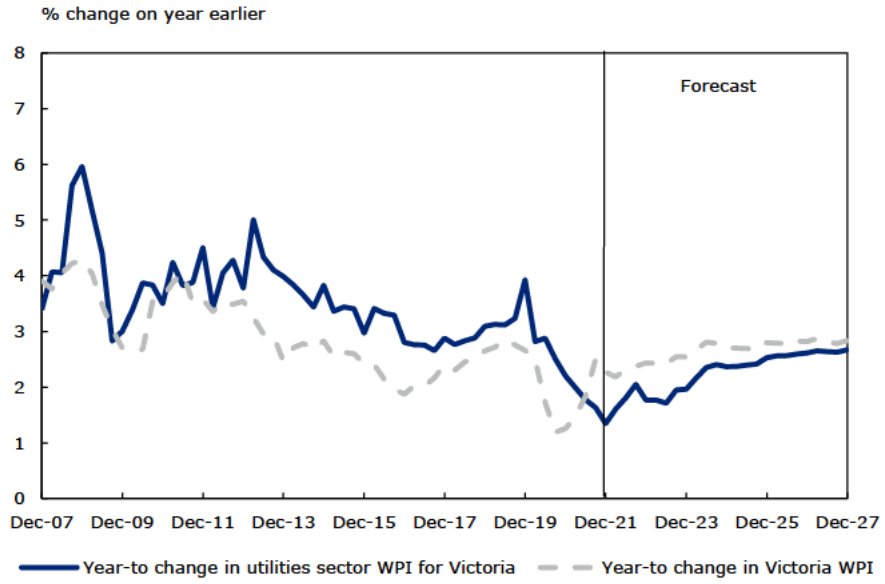
Source: ABS

Victorian utilities industry nominal wages are forecast to grow 1.8% in 2022 and 2023. Wage gains are then expected to accelerate, reaching 2.6% in 2027 as utilities sector output gradually recovers. These forecasts represent a cumulative upward revision in nominal wages growth of 0.6 percentage points from 2022 to 2027 compared with forecasts in Report 3B.

Victorian utilities industry real WPI is forecast to fall by 1.6% in 2022 and 0.4% in 2023 as higher CPI inflation outweighs higher nominal utilities industry WPI. Real wages are then forecast to grow from 2024, reaching 0.4% by 2027. These forecasts represent a downward revision of 1.4 percentage points in 2022 compared to Report 3B, a downward revision of 0.2 percentage points in 2023 and a cumulative upward revision of 0.3 percentage points from 2024 to 2027.

[20] Australian Energy Market Commission, *Residential Electricity Price Trends 2021* (25 November 2021) <https://www.aemc.gov.au/market-reviews-advice/residential-electricity-price-trends-2021>.

Chart 3.7 Victorian utilities WPI growth



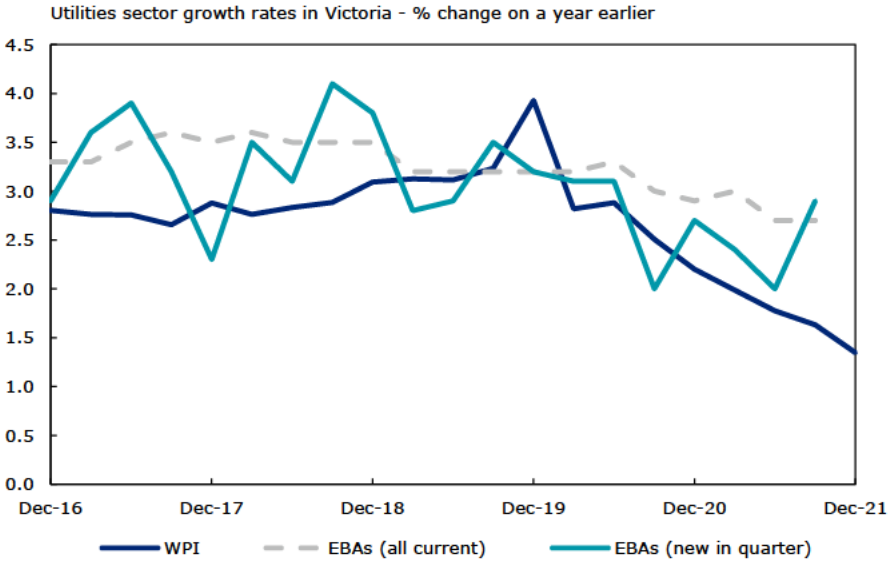
Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

3.2.2.2 Comparison with EBA outcomes

There were 92 current EBAs in the Victorian utilities industry in the September quarter of 2021, covering around 7,200 employees, with an AAWI of 2.7%. Chart 3.8 shows the Victorian utilities industry WPI and the outcomes in state EBAs for the utilities industry. The chart shows:

- The AAWI for current EBAs remained at its lowest value in the September quarter of 2021 since the EBA series began in the June quarter of 2010. The AAWI for current EBAs in Victoria (2.7% in September 2021) remains above the Australian average (2.5%).
- The AAWI for new EBAs grew to 2.9% in the September quarter of 2021 from 2.0% in the June quarter of 2021. A total of 400 employees are covered by the EBAs lodged in the September quarter.

Chart 3.8 Comparative measures of wage growth in the Victorian utilities industry



Note: % change on year earlier refers to growth between a quarter and the same quarter a year earlier.
Source: ABS, Attorney-General's Department

3.2.3 Labour productivity

Victorian labour productivity grew by 2.0% in 2021, above the 1.1% gain in Australian labour productivity. This reflects the strong rebound in the Victorian economy as lockdowns ended and COVID restrictions were gradually eased. Victorian all industry labour productivity growth is forecast to match the national figure in 2022 as pent-up demand in the Victorian economy fades and rates of growth return to match those seen at the national level.

Victorian utilities labour productivity grew by 1.5% in 2021, compared to a 1.2% gain in Australian utilities labour productivity – mirroring the trends seen in the wider Victorian economy. Growth in Victorian utilities labour productivity is forecast to accelerate to 2.0% in 2022 as utilities industry output increases at a faster rate than utilities industry employment. Productivity growth is forecast to moderate from 2023 as the COVID recovery slows, with utilities industry labour productivity expected to closely track productivity in the wider economy over the medium term.

Table 3.2 Victorian and national labour productivity forecasts

Calendar year changes in Victoria labour productivity forecasts

	History		Forecast				
Annual % change	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Victoria - All industries	2.0	1.9	1.6	1.5	1.3	1.1	1.2
Victoria - Utilities	1.5	2.0	1.7	1.6	1.4	1.2	1.3
National - All industries	1.1	1.9	1.6	1.5	1.4	1.2	1.3
National - Utilities	1.2	2.0	1.7	1.6	1.5	1.2	1.3

Source: ABS, Deloitte Access Economics.

Note: Productivity forecasts at the state level should be interpreted with care. Quarterly State Final Demand data is used to estimate quarterly GSP, which may not fully capture the impact of interstate trade. This can lead to some volatile movements in the first forecast year for state productivity.

3.2.4 Summary results

Table 3.3 Victorian and national wage forecasts

Calendar year changes in Victoria and national nominal WPI

	History	Forecast					
Annual % change	2021	2022	2023	2024	2025	2026	2027
Victoria - All industries	2.0	2.3	2.5	2.7	2.7	2.8	2.8
Victoria - Utilities	1.7	1.8	1.8	2.3	2.4	2.6	2.6
National - All industries	2.0	2.4	2.5	2.8	2.8	2.9	2.8
National - Utilities	1.4	1.9	2.3	2.7	2.7	2.9	2.9

Calendar year changes in Victoria and national real WPI

	History	Forecast					
Annual % change	2021	2022	2023	2024	2025	2026	2027
Victoria - All industries	-0.3	-1.0	0.2	0.5	0.4	0.5	0.5
Victoria - Utilities	-0.6	-1.6	-0.4	0.1	0.1	0.3	0.4
National - All industries	-0.9	-0.9	0.3	0.5	0.4	0.5	0.5
National - Utilities	-1.4	-1.4	0.1	0.4	0.4	0.5	0.6

Calendar year changes in Victoria labour productivity forecasts

	History	Forecast					
Annual % change	2021	2022	2023	2024	2025	2026	2027
Victoria - All industries	2.0	1.9	1.6	1.5	1.3	1.1	1.2
Victoria - Utilities	1.5	2.0	1.7	1.6	1.4	1.2	1.3
National - All industries	1.1	1.9	1.6	1.5	1.4	1.2	1.3
National - Utilities	1.2	2.0	1.7	1.6	1.5	1.2	1.3

Source: ABS, Deloitte Access Economics.

4 Queensland

4.1 Economic outlook

4.1.1 Overview

Queensland State Final Demand grew by 5.8% in 2021 and is now 6.1% above pre-COVID levels seen in December 2019. The state's economy benefited from relatively low levels of COVID community transmission in 2021, but the outbreak of the Omicron variant has weighed on activity in early 2022.

The number of hours worked fell by 2.9% from December 2021 to January 2022 amid an increase in COVID infections and close contacts that were required to isolate. Yet the fall in hours worked was modest compared to the 8.8% decline in national hours worked. The Queensland labour market saw the second largest employment increase of any state or territory in January 2022, with employment now 4.5% above the pre-COVID levels seen in February 2020. The unemployment rate has also fallen from a July 2020 peak of 8.7% to 4.4% in January 2020, but remains above the national unemployment rate of 4.2%.

Private consumption increased by 4.9% in 2021, supported by low COVID case numbers, a robust labour market, and increases in household wealth from accumulated savings during the pandemic and rising asset prices (with Brisbane dwelling values increasing 29.7% over the year to February 2022 – the largest gain of any capital city).[21] Looking ahead, private consumption is forecast to grow by 3.3% in 2022.

Dwelling investment grew by 20.6% in 2021 as low interest rates, rising dwelling values and government incentives supported activity. A total of 29,000 HomeBuilder applications were lodged in Queensland, contributing to a 32.4% increase in the number of dwelling units approved in 2021. Queensland has also benefitted from growth in interstate migration during the pandemic, adding further to demand for housing. Dwelling investment is forecast to moderate to 3.0% growth in 2022 as the effect of government stimulus wanes, house price growth moderates and mortgage rates begin to rise.

The global economic rebound from the pandemic has helped to boost commodity prices and support a recovery of Queensland goods exports. The Russian invasion of Ukraine saw coal prices reach record highs and Asian LNG spot prices increase by more than 50% in the final week of February 2022. Further prices rises are likely as commodity markets rebalance following the removal of Russian supply. Demand is also set to be supported by the recovery underway in global industrial activity.

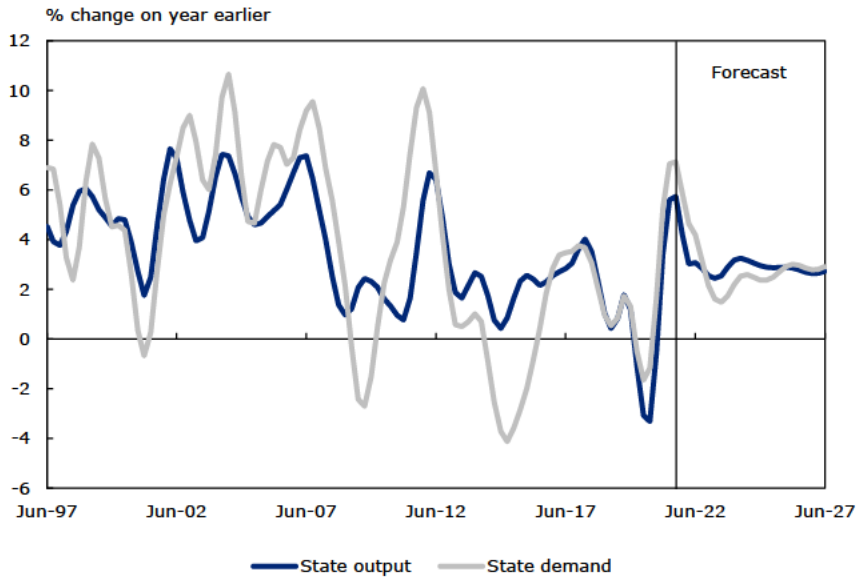
Queensland's relatively large tourism industry has been adversely affected by international border restrictions. The reopening of the international border on 21 February 2021 is set to drive a recovery in the state's services exports. Yet significant uncertainty remains over how quickly international tourists will return to Queensland.

Deloitte Access Economics forecasts Queensland GSP to increase by 3.5% in 2021-22 as the recovery from COVID gathers pace before moderating to a gain of 2.6% in 2022-23. The Queensland economy is forecast to grow at a faster pace compared to the Australian economy

[21] CoreLogic, *CoreLogic Home Property Value Index – Monthly Indices* (1 March 2022) <https://www.corelogic.com.au/sites/default/files/2022-02/CoreLogic%20home%20value%20index%20Mar%202022%20FINAL_0.pdf>.

over the period from 2020-21 to 2026-27, partly driven by faster forecast growth in the Queensland population.

Chart 4.1 Queensland output and state final demand



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

Table 4.1 Queensland economic forecasts

	History	Forecast					
Annual % change (unless noted)	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**
Consumption							
Private sector	5.1	2.3	2.8	3.0	3.1	2.7	3.2
Public sector	3.2	2.6	1.2	1.3	0.6	1.6	2.6
Private sector investment							
Dwelling investment	10.1	13.0	-2.0	-2.4	1.7	3.2	-1.1
Non-residential building	-8.6	16.3	5.5	7.8	4.5	6.2	4.1
Engineering construction	-9.3	10.6	5.0	4.5	4.3	5.9	3.9
Machinery and equipment	-3.6	15.0	8.9	5.5	3.5	5.4	3.2
IP and biological	1.1	5.8	0.2	6.9	4.8	5.6	4.4
Public investment							
General Government	6.2	19.3	-0.6	-4.6	-0.8	3.1	3.0
Public enterprises	-11.8	2.2	3.0	6.3	4.8	4.7	2.9
Real final demand	4.0	5.1	2.0	2.3	2.4	2.9	2.8
Private sector	4.4	5.1	2.4	3.0	3.1	3.2	2.9
Public sector	2.9	5.3	1.0	0.4	0.5	2.0	2.7
International trade							
Exports	-15.8	-1.3	18.4	14.7	8.3	3.8	2.2
Imports	-2.6	10.4	8.3	6.2	3.4	3.2	2.9
Gross state product	2.0	3.5	2.6	3.2	2.9	2.9	2.7
Employment	2.9	2.8	1.0	1.1	1.6	1.6	1.6
Unemployment rate (%)	6.6	4.9	4.5	4.5	4.6	4.6	4.7

Note: All variables (except for jobs and unemployment) expressed in inflation adjusted terms.
Source: ABS, Deloitte Access Economics.

4.1.2 Utilities

Queensland NEM average electricity demand fell in the December quarter of 2021 as increased solar PV generation offset a gain in underlying demand. Quarterly average electricity prices more than doubled over the previous year, reaching their highest December quarter average on record. Prices rose amid increased volatility with Queensland experiencing the largest intra-day demand swing (difference between minimum and maximum demand) on record. The state also experienced some periods of very high evening demands, declines in grid-solar output and restrictions in cheaper imports from New South Wales.

Meanwhile, coal-fired electricity output fell to its lowest December quarter level since 2014 amid outages at Callide C Power Station, while gas-powered electricity output fell to its lowest December quarter level since 2018.

Looking ahead, electricity futures markets are anticipating prices to continue to increase in 2022, with the state expected to have the highest wholesale electricity prices across the NEM.

Queensland has invested heavily in renewable energy generation in recent years, with around 20% of electricity used in the state being produced from renewable energy sources.[22] Further increases are expected, with the Queensland Government aiming to reach 50% renewable energy by 2030 and net zero emissions by 2050.

To further this transition the Queensland Government has a range of renewable commitments:

1. The $2 billion in Queensland Renewable Energy and Hydrogen Jobs Fund which helps government-owned firms increase ownership of commercial renewable energy and hydrogen projects as well as supporting infrastructure, potentially in partnership with the private sector.[23]
2. A $145 million investment to launch three renewable energy zones in the state. These zones are expected to include strategic network investments to streamline the development of renewable energy projects.[24]
3. Ensure reliability and security of the electricity network through investments in large-scale battery storage and pumped hydro projects.

Across the decade to 2030-31, AEMO forecasts that distributed solar PV will continue to see strong growth, business consumption will fall, and LNG liquefaction demand will remain flat. Queensland maximum demand is forecast to grow at a faster rate than in other regions over the medium term amid stronger rates of population growth.

A number of changes to the supply mix are also expected in the coming years. The 420 MW Callide C unit 4 is not expected to return to service until late 2022, while the 700 MW Callide B Power Station is scheduled to retire in 2028-29. Elsewhere, 728 MW of renewable energy generation and 100 MW of battery storage is due become available in 2021-22, while the 250 MW Kidston pumped hydro generator is set to commence production in early 2025.

The combination of modest forecast demand and continued growth in generation capacity means that negligible unserved energy is expected in Queensland over the decade to 2030-31.[25]

AEMO has forecast that maximum gas demand in the state is forecast to decline through to 2026, driven by reductions in industrial consumption. Industrial demand is then expected to remain relatively stable out to 2040. The AEMO noted that changing consumption patterns as industrial

[22] Queensland Government, Department of Energy and Public Works, *Queensland Renewable Energy Targets* (2 February 2022) <https://www.epw.qld.gov.au/about/initiatives/renewable-energy-targets.>
[23] Queensland Government, *Queensland Renewable Energy and Hydrogen Jobs Fund* <https://www.treasury.qld.gov.au/programs-and-policies/queensland-renewable-energy-and-hydrogen-jobs-fund/>
[24] Queensland Government, *Queensland Climate Action* (13 December 2021) <https://www.des.qld.gov.au/climateaction/sector-action/energy>
[25] Australian Energy Market Operator, *2021 Electricity Statement of Opportunities August 2021* (31 August 2021) <https://www.aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/nem_esoo/2021/2021-nem-esoo.pdf?la=en>.

users decarbonise and alternative supply sources are developed (e.g. hydrogen) could lead to relatively larger declines in gas demand.[26]

4.2 Outlook for wages

4.2.1 All industries

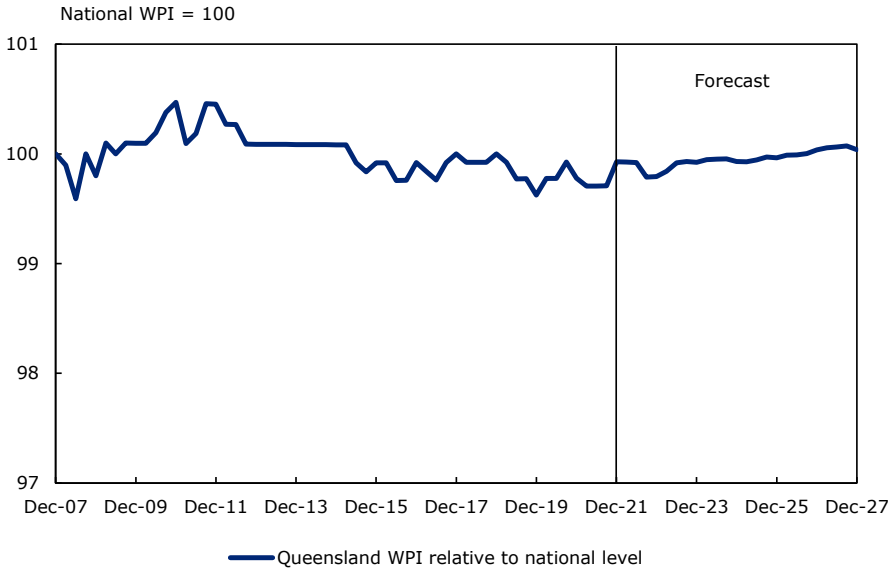
The Queensland WPI grew by 0.8% in the quarter to December 2021, the largest quarterly growth of any state or territory. Despite this, annual growth in Queensland WPI was 1.9% in 2021 compared to 2.0% in the Australian WPI.

Public sector wages in Queensland grew by 1.3% in the December quarter of 2021, above the 0.6% gain in private sector wages. The sharp rise in public sector wages was driven by the unwinding of earlier wage freezes. Among industries where data is available, wage gains in 2021 were fastest in the professional services (2.5%), accommodation and food services (2.2%) and manufacturing (2.2%) industries. Wage gains were slowest in the transport (1.2%), admin services (1.2%) and utilities (1.3%) industries.

The pace of wage growth in Queensland is expected to accelerate alongside economic activity in 2022. This is set to absorb spare capacity in the labour market and place upward pressure on wage growth.

Queensland wage growth is forecast to marginally exceed national wage growth (Chart 4.2). This reflects the relative strength of the Queensland economy, which is set to grow at a CAGR of 3.0% from 2020-21 to 2026-27, above the 2.9% CAGR in the Australian economy over the same period. This outperformance in the Queensland economy is expected to be driven by faster rates of population growth, as well as the recovery of industries that were adversely affected by COVID restrictions (with tourism accounting for a relatively large share of the Queensland economy).

Chart 4.2 Queensland WPI relative to national WPI



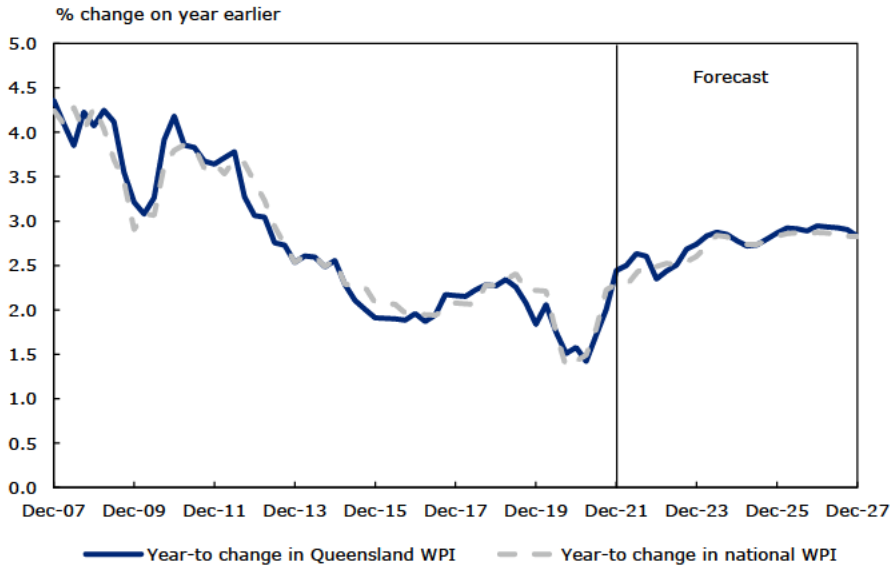
Source: ABS, Deloitte Access Economics.

The Queensland all industry nominal WPI is forecast to grow by 2.4% in 2021-22 and 2.5% in 2022-23 before reaching 2.9% in 2026-27. Nominal wage growth is a cumulative 3.6 percentage

[26] Australian Energy Market Operator, *Gas Statement of Opportunities March 2021* (29 March 2021) <https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2021/2021-gas-statement-of-opportunities.pdf?la=en>

points higher across the forecast period from 2021-22 to 2026-27 compared to forecasts provided in Report 3A.[27]

Chart 4.3 Queensland general WPI growth



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

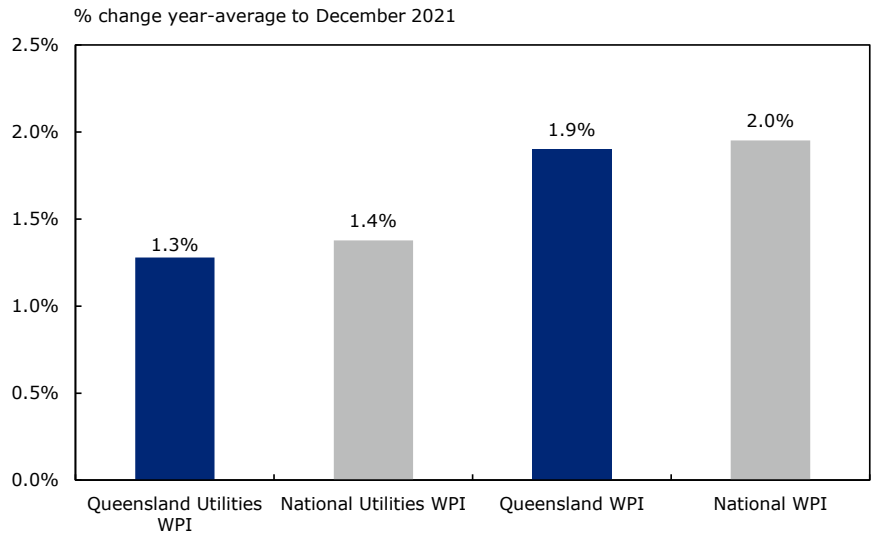
Queensland real wages are forecast to fall by 1.6% in 2021-22 as growth in CPI inflation outweighs growth in nominal wages. Real wages are forecast to grow by 0.3% in 2022-23 before accelerating to a gain of 0.6% in 2026-27. Real wage growth is forecast to be 1.4 percentage points lower than Report 3A in 2021-22, 0.3 percentage points higher in 2022-23, and a cumulative 1.4 percentage points higher over the period from 2022-23 to 2026-27.

4.2.2 Utilities industry wages

Wages in the Queensland utilities industry grew by 1.3% in 2021, compared to a 1.9% increase in the Queensland all industry WPI (Chart 4.4). This reflects the modest pace of growth in output and employment in the Queensland utilities industry compared to other industries in Queensland. Queensland utilities wages also grew at a marginally slower pace compared to Australian utilities wages.

[27] Report 3A was finalised in May 2021 and included a March 2021 last actual for WPI. The forecast period was 2020-21 to 2026-27.

Chart 4.4 Comparative WPI annual growth rates, year to December 2021



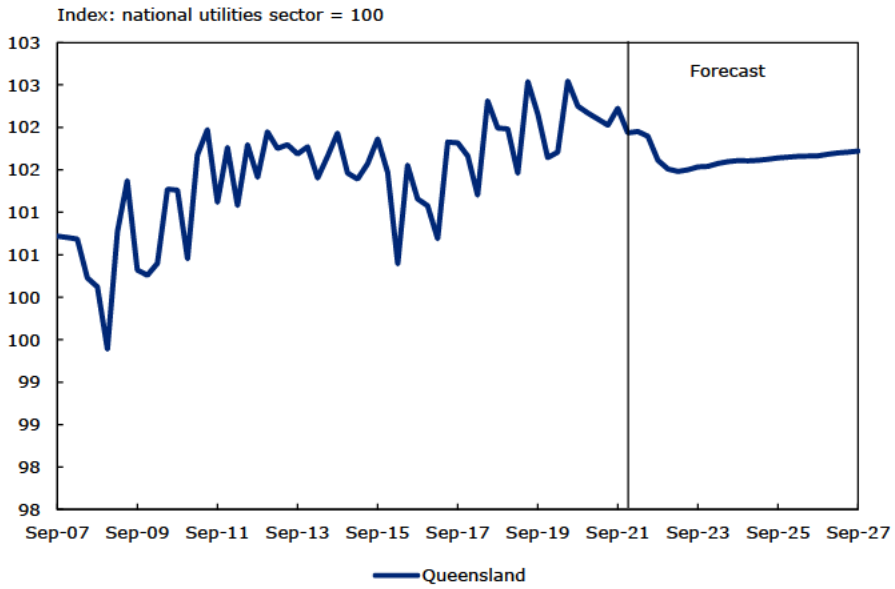
Source: ABS, Deloitte Access Economics.

The Queensland utilities industry WPI grew relative to the national utilities WPI from 2009 to 2011 and from 2016 to 2020. This largely coincides with periods of high or rising commodity prices. Higher export prices boost economic activity in Queensland – which has a large mining industry – proportionally more than it boosts the Australian economy. Higher levels of economic activity and higher population growth have also supported conditions in other Queensland industries which compete with the utilities industry for workers (e.g. the construction industry). This, in turn, places upward pressure on relative Queensland utilities wages.

But this trend has not held following the outbreak of COVID, with relative Queensland utilities wages falling despite commodity prices reaching record highs. This may be due to the impact of state and international border restrictions on labour mobility, as well as the fact that the export phase of the mining boom is less labour intensive compared to the construction phase (with most of Queensland's major resources projects already in operation).

Looking ahead, the Queensland utilities industry WPI is forecast to grow at a slower rate compared to the national utilities industry through to 2022-23. Beyond this, the Queensland utilities industry WPI is forecast to grow marginally faster than national utilities WPI amid the impact of higher rates of population growth in the state.

Chart 4.5 Queensland utilities WPI relative to national utilities WPI

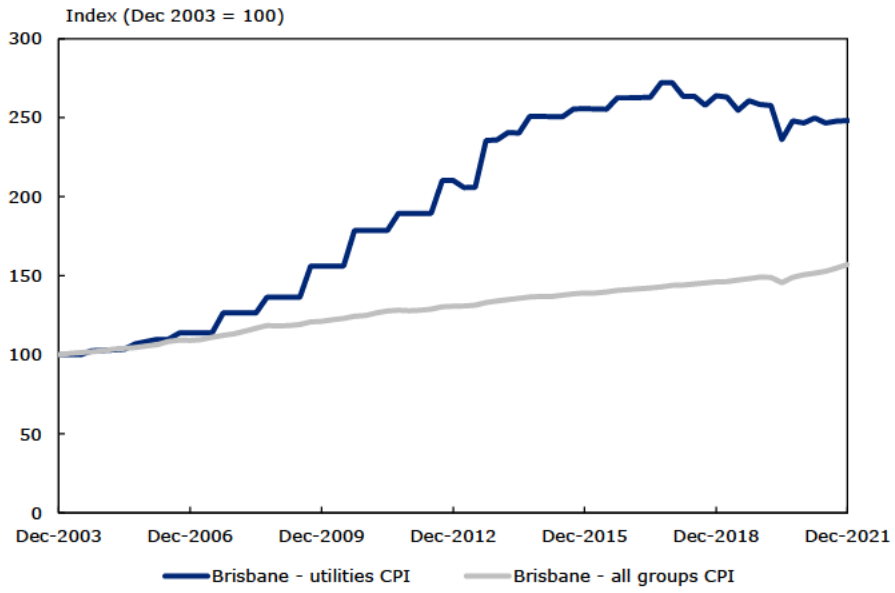


Source: ABS, Deloitte Access Economics.

Utilities prices in Brisbane increased broadly in line with the overall CPI until 2006-07. Over the next decade utilities CPI grew at a CAGR of 8.7% compared to a 2.6% CAGR for the broader CPI. The growth of rooftop solar PV generation and improvements in energy efficiency have reduced demand for grid-supplied electricity and continued growth in renewable energy capacity has increased supply. The combination of these factors has placed downward pressure on electricity price growth.

Despite this, utilities CPI remains above the 'all groups' CPI. The AEMC expects annual residential electricity bills in Queensland to decline by 10% through to 2024, largely driven by reductions in wholesale and environmental costs.[28]

Chart 4.6 Brisbane utility prices



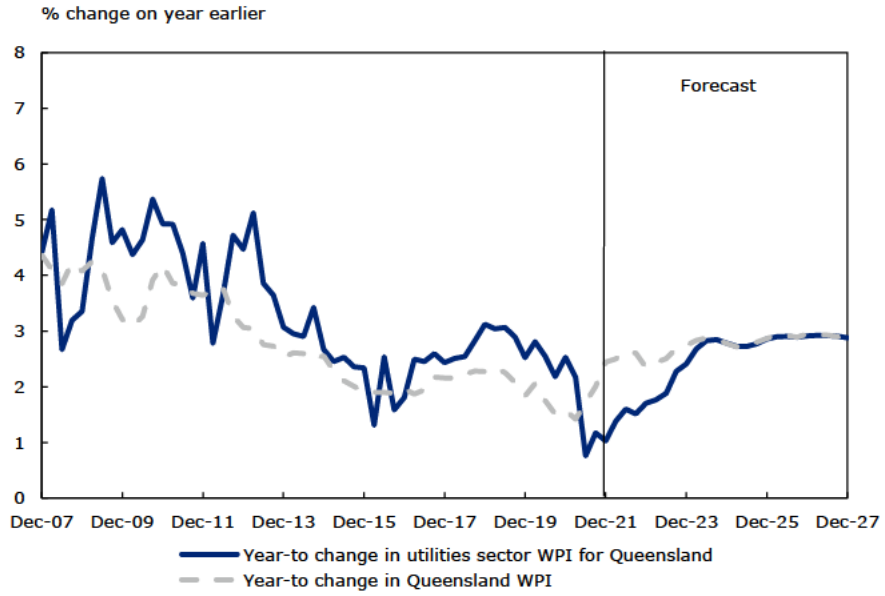
Source: ABS

[28] Australian Energy Market Commission, *Residential Electricity Price Trends 2021* (25 November 2021) <https://www.aemc.gov.au/market-reviews-advice/residential-electricity-price-trends-2021>.

Queensland utilities industry nominal wages are forecast to grow 1.3% in 2021-22 and 1.7% in 2022-23 before accelerating to a gain of 2.9% in 2026-27. These forecasts represent a cumulative upward revision in nominal wages growth of 2.3 percentage points from 2021-22 to 2026-27 compared with forecasts in Report 3A.

Queensland utilities industry real WPI is forecast to fall by 2.7% in 2021-22 and 0.5% in 2022-23 as nominal wage growth is outweighed by CPI inflation. Real wages are forecast to grow by 0.3% in 2023-24 before accelerating to a gain of 0.6% in 2026-27. These forecasts represent a downward revision of 2.6 percentage points in 2021-22, a downward revision of 0.3 percentage points in 2022-23 and a cumulative upward revision of 1.3 percentage points from 2023-24 to 2026-27 compared to Report 3A.

Chart 4.7 Queensland utilities general WPI growth



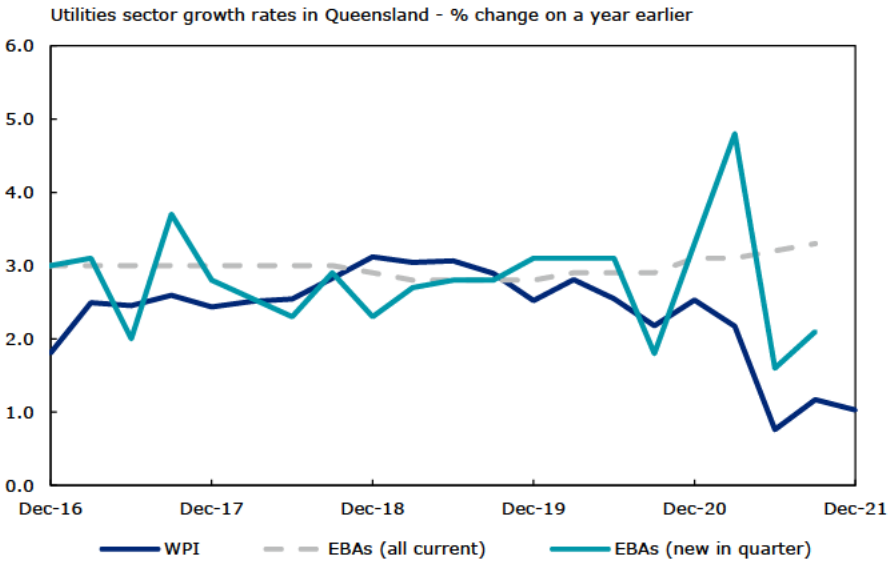
Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Deloitte Access Economics.

4.2.2.2 Comparison with EBA outcomes

There were 59 current EBAs in the utilities industry in the September quarter of 2021, covering around 5,300 employees, with an AAWI of 3.3%. Chart 4.8 shows the utilities industry WPI and the outcomes in state EBAs for the industry. The chart shows:

- The AAWI for current EBAs grew from 3.2% in the June quarter of 2021 to 3.3% in the September quarter of 2021. This is above the 2.5% AAWI for the Australian utilities industry in the September quarter of 2021.
- The AAWI for new EBAs was 2.1% in the September quarter of 2021. This included only 5 agreements covering 100 employees and is unlikely to place material downward pressure on the current AAWI or wider utilities WPI.

Chart 4.8 Comparative measures of wage growth in the Queensland utilities industry



Note: % change on year earlier refers to output growth between a quarter and the same quarter a year earlier.
Source: ABS, Attorney-General's Department

4.2.3 Labour productivity

Queensland utilities labour productivity grew by 0.4% in 2020-21, compared to a 0.8% decline in Queensland all industry labour productivity. This reflects the relative strength of employment gains in the wider Queensland economy compared to the Queensland utilities industry.

Queensland utilities labour productivity is forecast to grow by 0.9% in 2021-22 and 2.1% in 2022-23 as utilities output grows at a faster pace compared to utilities employment. The pace of productivity growth is then forecast to slow to 1.2% in 2026-27. Utilities labour productivity is forecast to closely track productivity in the wider economy over the medium term.

Table 4.2 Queensland and national labour productivity forecasts

Financial year changes in Queensland labour productivity forecasts

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Queensland - All industries	-0.8	0.7	1.6	2.0	1.3	1.2	1.1
Queensland - Utilities	0.4	0.9	2.1	1.8	1.4	1.4	1.2
National - All industries	0.9	0.5	2.3	1.6	1.4	1.4	1.1
National - Utilities	0.9	0.8	2.2	1.6	1.5	1.4	1.2

Source: ABS, Deloitte Access Economics.
Note: Productivity forecasts at the state level should be interpreted with care. Quarterly State Final Demand data is used to estimate quarterly GSP, which may not fully capture the impact of interstate trade. This can lead to some volatile movements in the first forecast year for state productivity.

4.2.4 Summary results

Table 4.3 Queensland and national wage forecasts

Financial year changes in Queensland and national nominal WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Queensland - All industries	1.6	2.4	2.5	2.8	2.8	2.9	2.9
Queensland - Utilities	1.9	1.3	1.7	2.5	2.8	2.9	2.9
National - All industries	1.5	2.3	2.5	2.7	2.8	2.8	2.9
National - Utilities	1.8	1.4	2.2	2.5	2.7	2.8	2.9

Financial year changes in Queensland and national real WPI

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Queensland - All industries	-0.5	-1.6	0.3	0.5	0.5	0.5	0.6
Queensland - Utilities	-0.2	-2.7	-0.5	0.3	0.5	0.5	0.6
National - All industries	-0.1	-1.2	0.0	0.4	0.5	0.5	0.6
National - Utilities	0.2	-2.0	-0.3	0.2	0.4	0.4	0.6

Financial year changes in Queensland labour productivity forecasts

	History	Forecast					
Annual % change	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Queensland - All industries	-0.8	0.7	1.6	2.0	1.3	1.2	1.1
Queensland - Utilities	0.4	0.9	2.1	1.8	1.4	1.4	1.2
National - All industries	0.9	0.5	2.3	1.6	1.4	1.4	1.1
National - Utilities	0.9	0.8	2.2	1.6	1.5	1.4	1.2

Source: ABS, Deloitte Access Economics.

References

AGL, *Board rejects revised unsolicited non-binding indicative proposal* (7 March 2022) <https://www.agl.com.au/content/dam/digital/agl/documents/about-agl/media-centre/2022/220307-board-rejects-revised-unsolicited-non-binding-proposal.pdf>.

ANZ-Roy Morgan, *ANZ-Roy Morgan Australian Consumer Confidence Media Release* (22 February 2022),<https://media.anz.com/posts/2022/02/Consumer_Confidence_inflation_expectations_climb?adobe_mc=MCMID%3D76468945189557347910868955218524878813%7CMCORGID%3D67A216D751E567B20A490D4C%2540AdobeOrg%7CTS%3D1645673576>.

ANZ, *ANZ Australian Job Advertisement Series Media Release* (7 February 2022), <https://media.anz.com/posts/2022/02/ANZ_Australian_Job_Ads_only_a_small_decline_during_Omicron?adobe_mc=MCMID%3D76468945189557347910868955218524878813%7CMCORGID%3D67A216D751E567B20A490D4C%2540AdobeOrg%7CTS%3D1645410667>.

Attorney-General's Department, *Trends in Federal Enterprise Bargaining, September 2021* (21 December 2022), <https://www.ag.gov.au/industrial-relations/publications/trends-federal-enterprise-bargaining-september-quarter-2021>.

Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product,* cat. No. 5206.0 (2 March 2022).

Australian Bureau of Statistics, *Average Weekly Earnings, Australia, November 2021* (24 February 2022).

Australian Bureau of Statistics, *Consumer Price Index*, *Australia*, *December 2021* (25 January 2022).

Australian Bureau of Statistics, *Estimates of Industry Multifactor Productivity, 2020-21* (13 December 2021).

Australian Bureau of Statistics, *Estimates of Industry Multifactor Productivity, 2019-20*, (30 November 2020).

Australian Bureau of Statistics, *Labour Force, Australia, January 2022* (17 February 2022).

Australian Bureau of Statistics, *Labour Force, Australia, Detailed January 2022* (24 February 2022).

Australian Bureau of Statistics, *National, state and territory population June 2021,* (16 December 2021).

Australian Bureau of Statistics, *Wage Price Index, Australia, December 2021* (23 February 2022) [additional industry details obtained via special request].

Australian Energy Market Commission, *Residential Electricity Price Trends 2021* (25 November 2021), <https://www.aemc.gov.au/market-reviews-advice/residential-electricity-price-trends-2021>.

Australian Energy Market Operator, *2021 Electricity Statement of Opportunities August 2021* (31 August 2021) <https://www.aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/nem_esoo/2021/2021-nem-esoo.pdf?la=en>.

Australian Energy Market Operator, *2021 Gas Statement of Opportunities* (29 March 2021) <https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2021/2021-gas-statement-of-opportunities.pdf?la=en>.

Australian Energy Market Operator, *Quarterly Energy Dynamics Q4 2021* (28 January 2022) <https://aemo.com.au/-/media/files/major-publications/qed/2021/q4-report.pdf?la=en>.

Australian Energy Market Operator, *Victorian Annual Planning Report October 2021* (29 October 2021), <https://aemo.com.au/en/library/major-publications >.

Australian Energy Regulator, *2021 State of the Energy Market* (2 July 2021), <https://www.aer.gov.au/publications/state-of-the-energy-market-reports/state-of-the-energy-market-2021>.

Brookfield and Grok Ventures, *Brookfield & Grok Ventures proposal to acquire 100% of AGL* (21 February 2022) <https://bep.brookfield.com/sites/bep-brookfield-ir/files/consortium-proposal-for-agl-media-release-210222.pdf>.

Commonwealth Treasury and Department of Finance, *Mid-Year Economic and Fiscal Economic Outlook 2021-22* (16 December 2021) <https://budget.gov.au/2021-22/content/myefo/index.htm>.

CoreLogic, *CoreLogic Home Property Value Index – Monthly Indices* (1 March 2022) <https://www.corelogic.com.au/sites/default/files/2022-02/CoreLogic%20home%20value%20index%20Mar%202022%20FINAL_0.pdf>.

Deloitte Access Economics, *Business Outlook December 2021* (16 January 2022).

Department of Industry, Science, Energy and Resources, *Australia's Long-Term Emissions Reduction Plan* (26 October 2021) <https://www.industry.gov.au/data-and-publications/australias-long-term-emissions-reduction-plan>.

Fair Work Commission, *Minimum wage increase starts today* (1 July 2021) < https://www.fairwork.gov.au/newsroom/media-releases/2021-media-releases/july-2021/20210701-annual-wage-review-2021-media-release >.

National Australia Bank, *NAB Monthly Business Survey – January 2022* (8 February 2022) <https://business.nab.com.au/monthly-business-survey-january-2022-51172/>.

National Skills Commission, *Vacancy Report – January 2022* (16 February 2022), <https://lmip.gov.au/default.aspx?LMIP/GainInsights/VacancyReport>.

Origin Energy, *Origin proposes to accelerate exit from coal-fired generation* (17 February 2022) <https://www.originenergy.com.au/about/investors-media/origin-proposes-to-accelerate-exit-from-coal-fired-generation/>.

Productivity Commission, *Productivity in Electricity, Gas and Water: Measurement and Interpretation* (staff working paper, 4 April 2012) <https://www.pc.gov.au/research/supporting/electricity-gas-water>.

Productivity Commission, *PC Productivity Insights: Recent Developments* (17 June 2021) <https://www.pc.gov.au/research/ongoing/productivity-insights/recent-developments-2021>.

Queensland Government, *2021-22 Budget Update Mid-Year Fiscal and Economic Overview* (16 December 2021) <https://budget.qld.gov.au/budget-papers/#myfer>.

Queensland Government, Department of Energy and Public Works, *Queensland Renewable Energy Targets* (2 February 2022) < https://www.epw.qld.gov.au/about/initiatives/renewable-energy-targets>.

Queensland Government, *Queensland Renewable Energy and Hydrogen Jobs Fund* <https://www.treasury.qld.gov.au/programs-and-policies/queensland-renewable-energy-and-hydrogen-jobs-fund/>.

Queensland Government, *Queensland Climate Action* (13 December 2021) <https://www.des.qld.gov.au/climateaction/sector-action/energy>.

Reserve Bank of Australia, *Forecast table – February 2022 – 'Central' Scenario* (3 February 2022) <https://www.rba.gov.au/publications/smp/2022/feb/forecasts.html >.

Reserve Bank of Australia, *Statement on Monetary Policy – February 2022* (3 February 2022) <https://www.rba.gov.au/publications/smp/2022/feb/ />.

Victorian Government Department of Environment, Land, Water and Planning, *Victorian Renewable Energy Target 2020/21 Progress Report* <https://parliament.vic.gov.au/file_uploads/VRET_2020-21_Progress_Report_xssr5nBs.pdf>.

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