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Economic Impacts of the 2018 HFE Reforms

Final Report

February 2026

About ACIL Allen

ACIL Allen is a leading independent economics, policy and strategy advisory firm, dedicated to helping clients solve complex issues.

Our purpose is to help clients make informed decisions about complex economic and public policy issues.

Our vision is to be Australia's most trusted economics, policy and strategy advisory firm. We are committed and passionate about providing rigorous independent advice that contributes to a better world.

Report to:

WA Department of Treasury and Finance

ACIL Allen acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land and its waters. We pay our respects to Elders, past and present, and to the youth, for the future. We extend this to all Aboriginal and Torres Strait Islander peoples reading this report.

Goomup, by Jarni McGuire

Contents

Glossary

Abbreviations	Definitions
CGC	Commonwealth Grants Commission
CGE	Computable General Equilibrium
DTF	WA Department of Treasury and Finance
GST	Goods and Services Tax
HFE	Horizontal Fiscal Equalisation
LHS	Left hand side
NWOG	No Worse Off Guarantee
RHS	Right hand side
States	States and Territories
SWIS	South West Interconnected System
VFI	Vertical Fiscal Imbalance

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Summary Report

Executive Summary

Summary of Analysis and Findings

ACIL Allen was engaged by the Western Australian Government's Department of Treasury and Finance to undertake an economic impact analysis centred on the macroeconomic impacts of the Commonwealth Government's 2018 reforms to the distribution of Goods and Services Tax (GST) revenue to Australia's States and Territories, and decisions taken downstream of these reforms.

This Executive Summary contains a distillation of the research, modelling and analysis contained in the full body of the report. ACIL Allen's key findings from the economic impact analysis are presented below, for clarity and ease of reference for stakeholders interested in understanding the outcomes and implications of our analysis.

Report Findings

Net fiscal impacts

ACIL Allen's analysis suggests the net fiscal impact – before consideration of the flow on impacts of spending and investment by the Western Australian Government owing to the reforms – on the combined Commonwealth and State Government finances is $26.9 billion. This accounts for the counterfactual case where the 2018 reforms were not implemented. See Section 3.3: Financial and Expenditure Impacts.

Investments and expenditure funded by the reforms

Working with the Department of Treasury and Finance, ACIL Allen's analysis has identified $22.8 billion of projects, programs and investments made by the Western Australian Government through the additional fiscal capacity provided by the reforms. This includes major economic infrastructure developments, tax reforms, and targeted initiatives to boost economic efficiency and productivity. See Section 3.4: Project Investment and Expenditure.

Macroeconomic impacts and benefits

Computable General Equilibrium (CGE) modelling shows the net economic impact of the reforms is a $51.8 billion to $67.8 billion boost to national Gross Domestic Product (GDP) in the 20 years from the commencement of the reforms. The majority of benefits flow from productivity benefits from the investments the reforms have enabled. The modelling also shows Commonwealth tax receipts are $13.3 billion to $16.2 billion higher than without the reforms. See Section 4.2: Economic Impact Results.

ACIL Allen estimates that as of the 2024-25 financial year, the Horizontal Fiscal Equalisation (HFE) reforms have generated between $2,358 million and $2,440 million of Commonwealth taxes, while interest expenses have increased by $914 million. This means the reforms have, to date, delivered a modest positive net increase in Commonwealth Government revenue. See Section 4.3: Commonwealth Tax Benefits vs Interest Expenses.

Background and Context

The Goods and Services Tax (GST) is a 10% value-added tax applied to many goods and services sold or consumed in Australia. There are some goods and services exempt from the tax, including basic food items, medical and education services. The GST was introduced on 1 July 2000 as a broad-based consumption tax designed to simplify the Australian tax system. GST revenue is collected by the Commonwealth Government, and is distributed to Australia's eight States and Territories using the principle of Horizontal Fiscal Equalisation (HFE).

In 2018, the Commonwealth Parliament changed the way GST revenue is distributed among the States and Territories of Australia.

The 2018 reforms were the Commonwealth Government's response to the Productivity Commission review of the HFE system. These reforms replaced full equalisation with **reasonable equalisation**, which ensured that States have the fiscal capacity to provide **comparable services** up to the level of a 'standard' State. This was defined as the fiscally stronger of New South Wales or Victoria. This ensures that no State receives less GST per person than the standard State. Therefore, if any State is fiscally stronger than the standard State, its GST relativity will be increased to the relativity of the standard State.

The reforms were principally designed to address concerns about the volatility of the existing methodology used to distribute the revenue to the States. The reforms were also in recognition of many shortfalls in the previous arrangements. Other States have criticised the reforms, claiming they unfairly benefit Western Australia. The reforms have also been criticised due to the higher than anticipated cost to the Commonwealth.

The 2018 reforms have provided a significant increase in Western Australia's fiscal capacity since they were implemented. Modelling prepared by the WA Department of Treasury and Finance (DTF) suggests the Western Australian Government has received and is expected to receive **an additional $45.2 billion** in GST revenue between 2019-20 and 2028-29 – an increase from $27.2 billion to $72.5 billion. Even with the reforms, Western Australia will still subsidise the other States by $23.6 billion over this same period relative to an equal per capita distribution.

In this context, DTF has engaged ACIL Allen to undertake an independent assessment of whether the 2018 HFE reforms are in the national interest, by showing how the additional funds provided to WA as a result of the HFE reforms have been used to grow the State's key industries for the benefit of the national economy.

ACIL Allen worked with DTF to build a framework to address the financial impacts of the reforms on the Western Australian State Budget, the Commonwealth Budget, and the direct effects of any changes to these which can be observed in the Western Australian economy. ACIL Allen worked with DTF to determine how the additional financial capacity from the HFE reforms has been used by the State Government, particularly in facilitating additional infrastructure investment over and above 'business as usual' levels.

ACIL Allen then modelled the macroeconomic impacts of the financial flows and project expenditures attributable to the reforms using its in-house CGE model, *Tasman Global*. The CGE modelling results provide a perspective of the medium term macroeconomic impacts and consequences of the Western Australian Government's spending and other decisions flowing from the Commonwealth Government's GST distribution reforms, as well as the impact of the reforms on the Commonwealth Government's financial position.

Estimating Impacts

Western Australian Government public finance impacts

ACIL Allen's accounting of the impact of the HFE reforms on the Western Australian Government's operating financial position, across the 2019-20 to 2028-29 period, is presented below (**Figure ES 1**).

Figure ES 1 Aggregate Financial Impacts on Western Australian State Budget from HFE Reforms, ACIL Allen Estimates and Modelling, 2019-20 to 2028-29, $bn (nominal dollars)

Source: ACIL Allen

Overall, ACIL Allen estimates the Western Australian Government's financial capacity has increased by $49.3 billion between 2019-20 and 2028-29. This increase in financial capacity comprises:

— $45.2 billion of additional GST revenue as a consequence of the HFE reforms

— $1.1 billion of additional Commonwealth Government funding and supports tied to the investment and program expenditure decisions taken by the Western Australian Government as a result of the additional financial capacity above

— $3.1 billion of avoided consequential additional borrowings to account for higher interest expenses in lieu of the additional financial capacity above.

Within the additional financial capacity resulting from the 2018 HFE reforms, ACIL Allen estimates that the Western Australian Government has:

— Provided $0.5 billion of taxation relief through a permanent increase to the payroll tax exemption threshold

— Invested an additional $18.5 billion in economic infrastructure designed to increase the efficiency and productivity of the Western Australian economy, of which $6.5 billion has flowed to additional road network investment and $12.0 billion to various other economic infrastructure investments

— Spent an additional $3.8 billion on economy-centric programs such as training, project activation and support, and direct local economic expenditure in line with various public policy and strategic objectives

— Avoided $26.6 billion of gross borrowings, of which $23.5 billion is accounted for as the difference between the HFE reform dividend and the spending decisions outlined above, and $3.1 billion in avoided interest expenses and associated balance sheet impacts.

Commonwealth Government public finance impacts

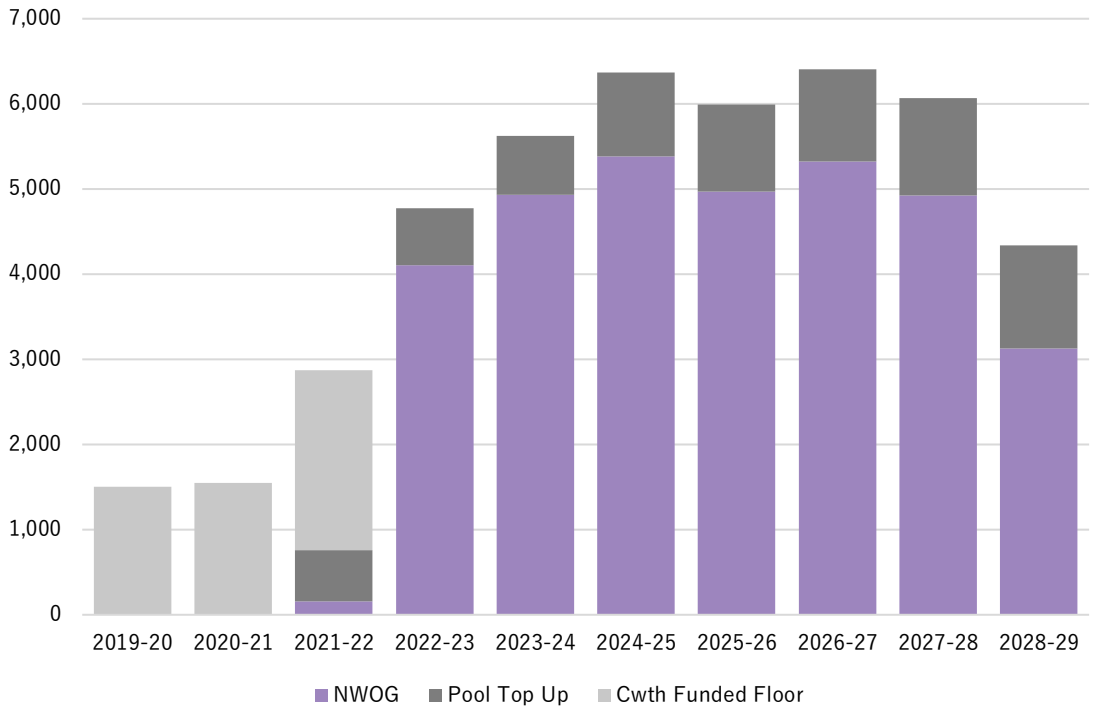
The Commonwealth Government's total actual and forecast additional expenditure commitments associated with the HFE reforms are outlined below. Overall, the analysis suggests the Commonwealth Government has spent an additional $45.5 billion between 2019-20 and 2028-29, spread across the three programs:

— $32.9 billion in a payment known as the No Worse Off Guarantee (NWOG),

— $7.4 billion in the National GST Pool Boost (GST Top Up payments), and

— $5.2 billion in Commonwealth-Funded Floor payments (between 2019-20 and 2021-22)

Figure ES 2 Total Additional Direct Commonwealth Government Expenditure to Deliver HFE Reforms, by Expenditure Line, $m (nominal dollars)



Source: Department of Treasury and Finance, ACIL Allen

The **NWOG** is an additional payment made by the Commonwealth Government which fully offsets the reduced GST grant revenue allocated to any State or Territory which otherwise would have seen a reduction in its revenue owing to the reforms to the HFE system identified above. The NWOG was due to expire in 2026-27 (the final year of the transition to the new system) but was extended to 2029-30 in December 2023.

The **National GST Pool Boost** is a Commonwealth payment provided to all States and Territories which has increased the total value of the GST pool (which is then distributed in accordance with the prevailing distribution approach) in each year since 2021-22.

The **Commonwealth-funded Floor payments** were initial payments to Western Australia (and the Northern Territory in 2019-20) to give rise to the outcomes of the 2018 Reforms, prior to the NWOG and Pool Top Up mechanisms being introduced.

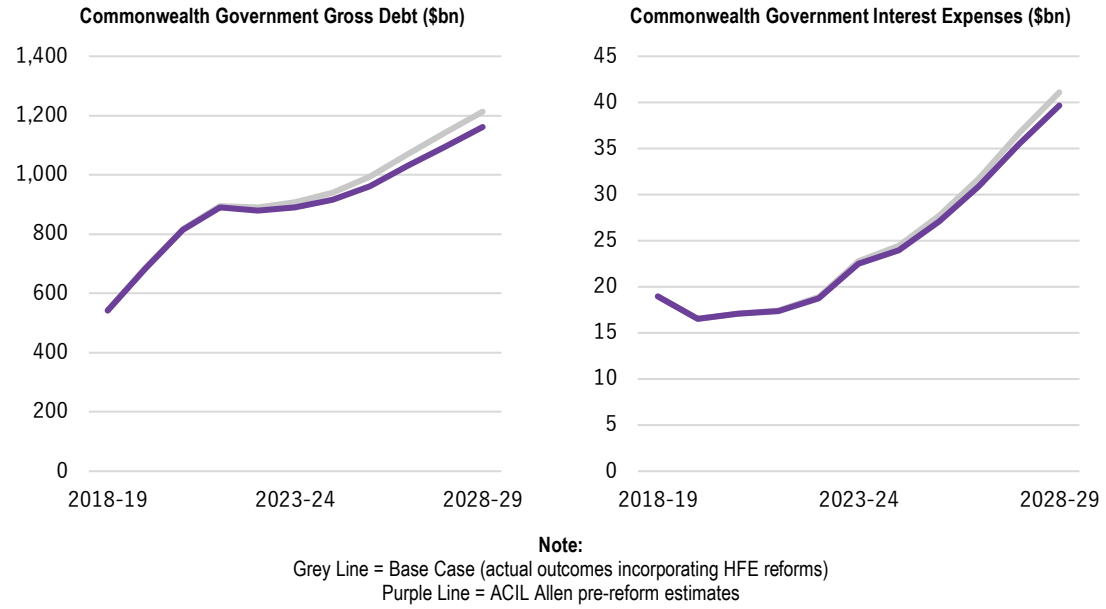
Beyond this, ACIL Allen estimates the Commonwealth Government has invested an additional $1.1 billion in major economic infrastructure and programs in Western Australia on a co-funding basis with the Western Australian Government, which is additive to the HFE reform expenditures presented above. This takes the total direct expenditure estimated to be attributable to the HFE reforms within ACIL Allen's framework to $46.5 billion over the 10 years of the financial modelling period.

This additional expenditure is assumed to have required additional gross borrowings by the Commonwealth. This in turn results in additional interest expenses, which have a consequential impact on the level of borrowings. ACIL Allen estimates the decisions made by the Commonwealth flowing from the HFE reforms have added $51.5 billion to Commonwealth gross debt by the end of the financial modelling period. This would mean the reforms have added an estimated 4.4% to gross Commonwealth Government debt on issue.

The estimated additional debt issuance results in additional interest expenses for the Commonwealth Government. ACIL Allen estimates the Commonwealth Government has incurred and will incur an additional $5.0 billion of interest expenses between 2019-20 and 2028-29 as a result of the additional borrowings required to meet its decisions with respect to the HFE reforms, or $500 million per annum.

The profile of ACIL Allen's estimated impact of the Commonwealth Government's decisions related to the HFE reforms is provided below.

Figure ES 3 Estimated Impact of Commonwealth Government Expenditure Decisions Related to HFE Reforms, Gross Debt and Interest Expense, $bn (nominal)



Source: ACIL Allen

Economic Impact Assessment Summary

ACIL Allen has prepared economic impact analysis modelling on two scenarios:

— The **Conservative Scenario**, which presents a conservative view of the long term economic and productivity gains associated with investments made by the Western Australian Government. In the Conservative Scenario the parameters used to define the ongoing value of the projects and investments are set at the lower end of real world expectations, and would be expected to be sufficient for the Western Australian Government to have taken a decision to fund these projects.

— The **Balanced Scenario**, which presents a less conservative, but still pragmatic and realistic, view of the long term economic and productivity gains associated with the projects.

Overall, the Economic Impact Assessment demonstrates that the Western Australian Government's decisions with respect to expenditure and investment flowing from the fiscal capacity afforded by the 2018 GST distribution reforms have and will continue to generate net positive economic outcomes for the Australian economy. The results are positive across both scenarios.

This is due to the Western Australian Government's decisions to invest in a range of economic and other related infrastructure projects and economic development programs, which are unlikely to have been funded or supported without the additional fiscal capacity.

ACIL Allen estimates the investments and spending enabled by the reforms in Western Australia will provide a boost of between **$51.8 billion and $67.8 billion to national Gross Domestic Product (GDP)** in the 20 years from the commencement of the reforms. The economic impacts are driven by the three streams of impact quantified by ACIL Allen in the project modelling. These are:

— **Direct Project Expenditure and Investment (DE&I).** These impacts are the short and medium term economic impacts of the additional program and project investment undertaken by the Western Australian Government over the period where the reforms have been modelled, being 2019-20 to 2028-29.

— **Capital Deepening and Productivity Benefits (CD&PB).** These impacts are the medium term economic impacts of the additional capital – physical and human capital – investments undertaken by the Western Australian Government, which impact on labour and capital productivity in the Western Australian economy.

— **Major Project Investment (MPE).** These impacts centre on the major private sector project benefits attributed to the enabling investments funded by the Western Australian Government, and the associated macroeconomic impacts of these projects on the Western Australian and national economies.

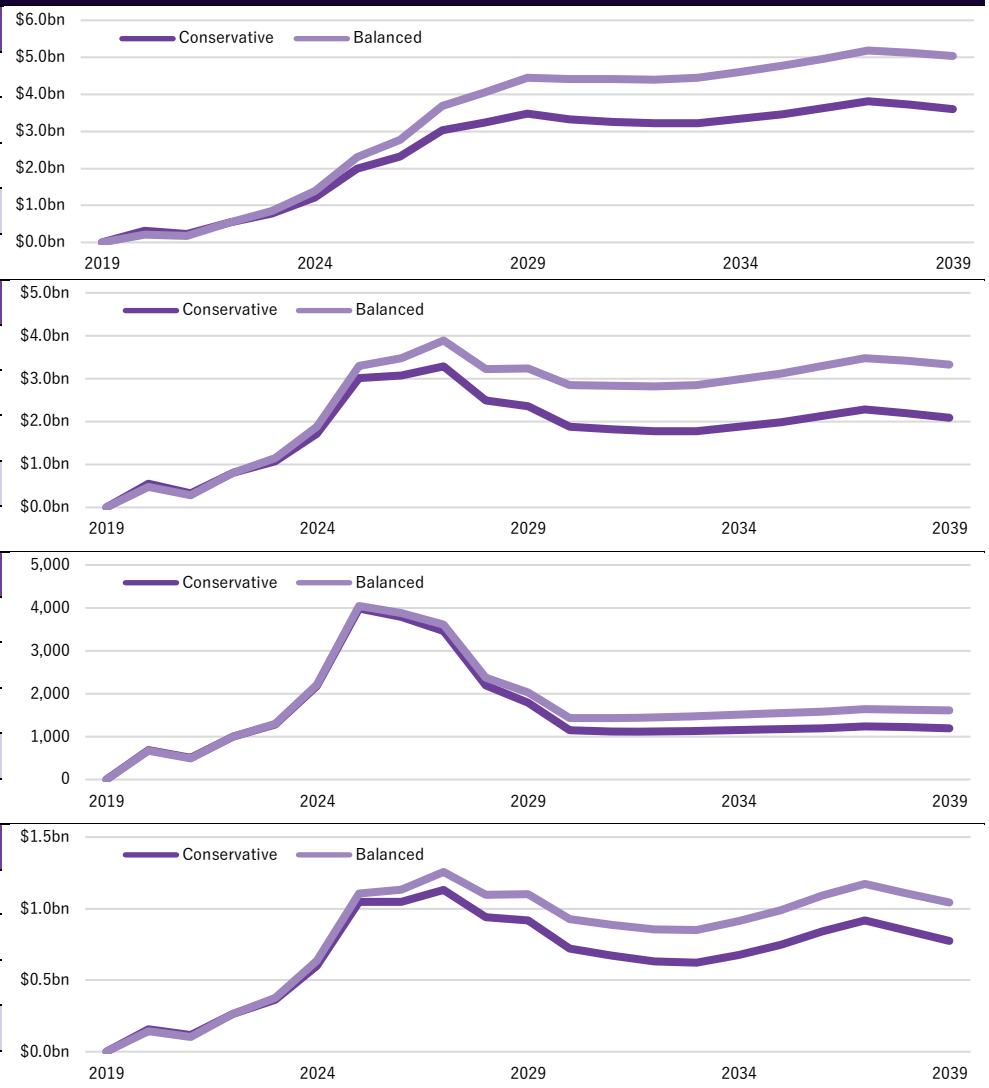
Economic impacts reflect the net effects of the fiscal transfer from the Commonwealth Government to the Western Australian Government, and its associated investment in economic infrastructure and programs designed to generate additional economic activity in Western Australia. The benefits centre on how the net change in Government borrowings (incorporating the higher level of Commonwealth borrowings and lower level of State borrowings in the policy case), into productivity enhancements in the Western Australian economy that permit higher levels of production, population growth (through migration), and labour utilisation.

The full report presents substantial additional details regarding the benefits. A summary of the results across the two scenarios is provided on the following page.

Figure ES 4 Economic Impact Assessment, Summary Results, by Scenario / Metric / Impact Stream

		Conservative	Balanced
Real Output		**Total**	
Direct Expenditure & Investment	$m	17,423.9	17,423.9
Capital Deepening & Productivity Benefit	$m	20,466.4	36,520.6
Major Project Investment	$m	13,829.6	13,829.6
Total	$m	51,719.8	67,774.1
Real Income		**Total**	
Direct Expenditure & Investment	$m	8,383.2	8,383.2
Capital Deepening & Productivity Benefit	$m	18,095.1	32,280.9
Major Project Investment	$m	12,039.7	12,039.7
Total	$m	38,518.0	52,703.7
Employment		**Long Run**	
Direct Expenditure & Investment	FTE	223.3	223.3
Capital Deepening & Productivity Benefit	FTE	660.4	1,077.2
Major Project Investment	FTE	316.9	316.9
Total	FTE	1,200.6	1,617.4
Taxes (Commonwealth & State)		**Total**	
Direct Expenditure & Investment	$m	4,647.6	4,647.6
Capital Deepening & Productivity Benefit	$m	4,202.5	7,223.2
Major Project Investment	$m	5,185.6	5,185.6
Total	$m	14,035.7	17,056.5

Summary Chart



Source: ACIL Allen

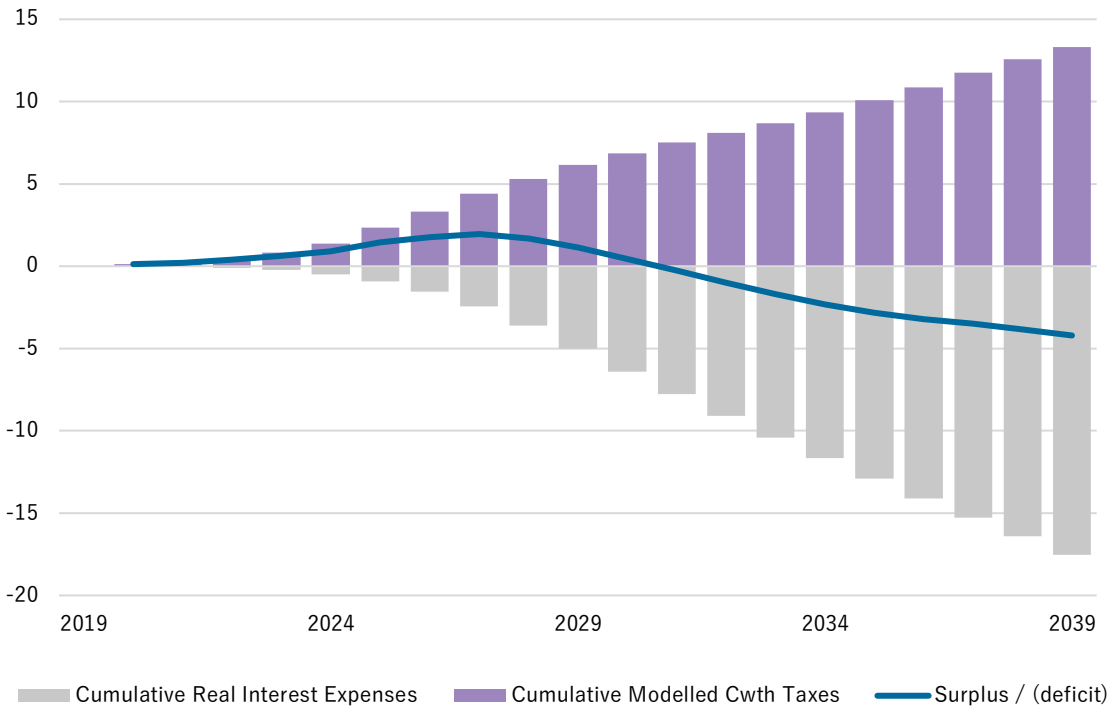
Commonwealth Tax Benefits vs Interest Expenses

ACIL Allen's Economic Impact Assessment identifies the net incremental Commonwealth income tax payments which have – prima facie – been generated to date and are expected to be generated on an ongoing basis as a result of the Western Australian Government's expenditure and investments. This is because the assessment is based on a counterfactual case where the HFE reforms did not happen, and these expenditures and investments did not occur. ACIL Allen's fiscal modelling, used to determine the net fiscal impacts of the reforms and associated financial impacts on the Western Australian and Commonwealth Governments, similarly identifies the attributable changes to revenue and expenditure associated with the HFE reforms.

Therefore, it is possible to compare the attributed Commonwealth taxation benefits to the estimated attributable changes to Commonwealth finances – particularly interest expenses, as the only "real" expenditure to date given the parameterisation of the Commonwealth's NWOG and GST Pool Top Up as being funded by additional Commonwealth borrowings.

The results of this analysis are provided below, using the Conservative Scenario. ACIL Allen estimates that as of the 2024-25 financial year, the HFE reforms have generated **$2,358 million of Commonwealth taxes, while interest expenses have increased by $914 million.** This means, all things being equal, the HFE reforms have to date generated an additional $1,444 million of net Commonwealth Government fiscal capacity. By 2038-39, ACIL Allen's modelling suggests the cumulative financial position of the Commonwealth (abstracting the direct balance sheet impact of additional gross borrowings, focussing just on the expenditure impacts of interest payments) is a net change of -$4,207 million in real 2026 dollars – or less than 1/10th of the headline cost of the NWOG and Pool Top Up payments (**Figure ES 5**).

Figure ES 5 Estimated Net Cwth Fiscal Impact, Expenditure Basis, $bn (real 2026), Conservative Scenario results, cumulative

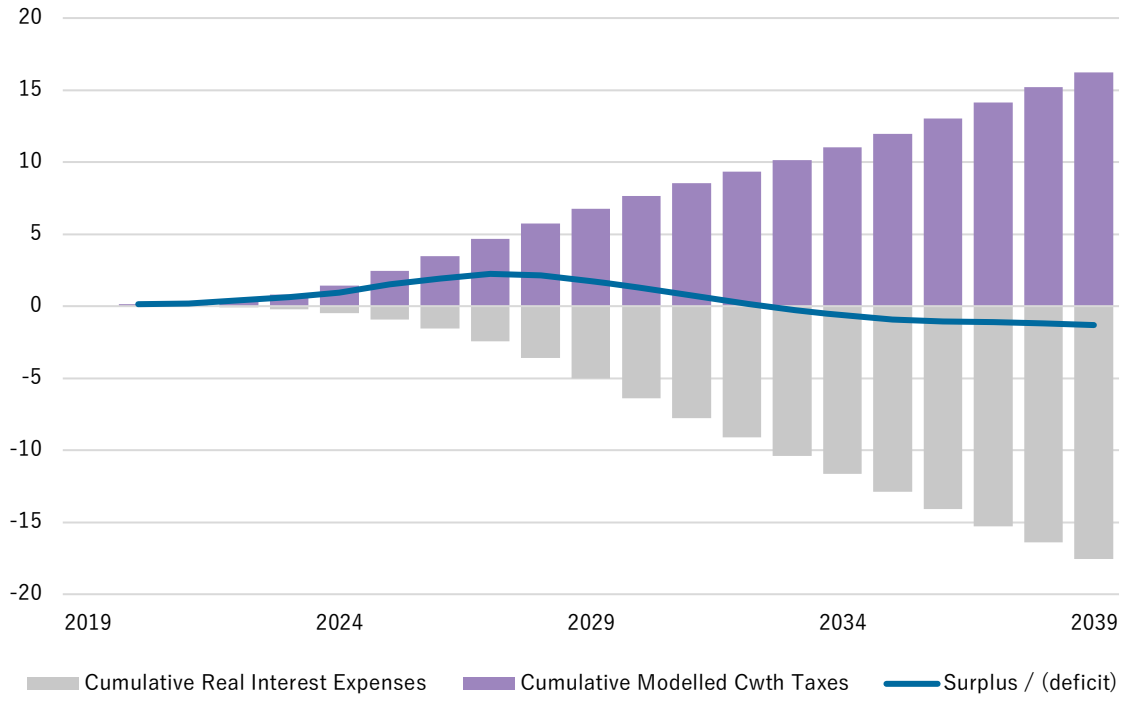


Source: ACIL Allen

The results are similar, albeit more positive, in the Balanced Scenario. ACIL Allen estimates that as of the 2024-25 financial year, the HFE reforms have generated **$2,440 million of Commonwealth taxes, while interest expenses have increased by $914 million.** This means, all things being equal, the HFE reforms have to date generated an additional $1,526 million of net Commonwealth Government fiscal capacity.

ACIL Allen's modelling suggests the cumulative financial position of the Commonwealth (abstracting the direct balance sheet impact of additional gross borrowings, focussing just on the expenditure impacts of interest payments) is a net change of -$1,314 million in real 2026 dollars – just 2.8% of the headline cost of the NWOG and Pool Top Up payments to the end of the 2030 financial year (**Figure ES 6**).

Figure ES 6 Estimated Net Cwth Fiscal Impact, Expenditure Basis, $bn (real 2026), Balanced Scenario, cumulative



Source: ACIL Allen

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Main Report

1 Report Context

This section provides the context behind the study, which is centred on providing input into the WA Government's submission to the Productivity Commission Inquiry into the GST Distribution System.

1.1 Productivity Commission review into 2018 HFE reforms

In 2018, the Commonwealth Parliament changed the way GST revenue is distributed among the States and Territories of Australia. The reforms were principally designed to address concerns about the volatility of the existing methodology used to distribute the revenue to the States. The main reforms legislated via amendments to the Commonwealth Grants Commission Act 1973 in 2018 were:

- changing the equalisation benchmark so that the fiscal capacity of all States is at least equal to the fiscally stronger of New South Wales or Victoria
- ensuring a minimum GST revenue-sharing relativity (now 0.75)
- requiring the GST pool to be 'topped-up' by the Commonwealth into perpetuity, and for that 'top-up' to grow at an indexed rate
- during a transition period of six years from 2021-22 to 2026-27, any State that received less than it would have received under the previous GST distribution system would be entitled to additional No Worse Off Guarantee (NWOG) payments.

The 2018 legislation also provides for a review of the operation of the Act by the Productivity Commission by 31 December 2026.

On 24 September 2025, the Commonwealth Government Treasurer, The Hon Jim Chalmers MP, presented the terms of reference to the Productivity Commission. The terms of reference require the Commission to inquire into the operation of the 2018 legislation, **including whether the 2018 changes to the GST distribution system are operating efficiently, effectively and as intended and the fiscal implications for each State and Territory, and for the Commonwealth, of the changes made by the 2018 legislation**.

The Commission is to investigate:

- To what extent the current arrangements are:
  - Delivering a reasonable level of horizontal fiscal equalisation
  - Appropriately balancing the objective of responsiveness to changing circumstances with the objectives of reducing volatility and improving the certainty of GST revenue streams to support State fiscal planning
  - Supporting States and Territories to pursue reforms, including to the efficiency of service delivery and State and Territory revenue bases, and
  - Fiscally sustainable for the Commonwealth and States and Territories.
- Whether alternative arrangements would better achieve some or all of these outcomes.
- The interaction between GST payments and other Commonwealth payments to States, including the principles for exempting payments from the Commonwealth Grants Commission's assessments.

The terms of reference also require the Commission to undertake an assessment of implementation feasibility and risks, and be cognisant of the Commonwealth's policy commitments in relation to GST distribution. In its recommendations, the Commission should provide a range of options including options

with a funding relativity floor comparable to the current level, with and without top-up funding from the Commonwealth.

1.2 Purpose of this report

The reforms to the distribution of GST introduced in 2018 were in recognition of many shortfalls in the previous arrangements. Other States have criticised the reforms, claiming they unfairly benefit WA. The reforms have also been criticised due to the higher than anticipated cost to the Commonwealth.

From the perspective of the WA Government, there is a risk that the 2018 HFE reforms could be wound back or repealed as part of the Productivity Commission Review.

In this context, the WA Department of Treasury and Finance (DTF) has engaged ACIL Allen to undertake an independent assessment of whether the 2018 HFE reforms are in the national interest, by showing how the additional funds provided to WA as a result of the HFE reforms have been used to grow the State's key industries for the benefit of the national economy.

In response, ACIL Allen has designed an approach that will centre on the use of its Computable General Equilibrium (CGE) model, *Tasman Global*, to model the economy-wide impacts of Western Australia's increased financial capacity from the 2018 HFE reforms.

ACIL Allen worked with DTF to build a framework to address the financial impacts of the reforms on the Western Australian State Budget, the Commonwealth Budget, and the direct effects of any changes to these which can be observed in the Western Australian economy. ACIL Allen worked with DTF to determine how the additional financial capacity from the HFE reforms has been used by the State Government, particularly in facilitating additional infrastructure investment over and above 'business as usual' levels.

From a Rest of Australia perspective, the impact of the 2018 HFE reforms will be modelled through an increase in Commonwealth Government borrowings, commensurate to the additional funding which has been provided to the HFE system to account for the NWOG and the National GST Pool Boost. The immediate impact of this is centred on an increase in interest payments for the Commonwealth Government, which will be included in the shocks of the scenario to the Australian economy.

Once these impacts are determined, ACIL Allen translates those financial outcomes into modelling inputs for the economy-wide modelling. Further details on the processes, methodologies and assumptions are provided throughout the report.

1.3 Report structure

The structure of this report described briefly below provides a logical sequence of research and analysis required to undertake the economy-wide modelling of the impacts of the HFE reforms:

Section 2: GST Distribution System in Australia provides a descriptive analysis of the situation, broad context of the 2018 reforms to the GST distribution system, and articulates the direct financial impact of the reforms on the Western Australian Government's finances.

Section 3: GST Distribution Reform Impacts in Western Australia is the key analytical task whereby ACIL Allen worked with DTF to develop tailored approaches to assessing the impact of the reforms on the Western Australian, Commonwealth and other States and Territories budgets, and work through the incremental economic expenditure and investment which has been funded in Western Australia as a result of the reforms.

Section 4: Economic Impact Assessment presents the economy-wide impacts of the HFE reforms, measured using ACIL Allen's independent Computable General Equilibrium (CGE) model *Tasman Global*. The inputs and parameters for the CGE modelling are sourced from the work presented in Section 3 of the report. There are two scenarios: a "Conservative" scenario, and a "Balanced" scenario, where the former makes conservative assumptions regarding the benefits of project investments and the latter makes less conservative but still realistic assumptions. The results of the CGE modelling are presented in terms of the macroeconomic impact on the Australian economy and relevant budget / fiscal aggregates.

2 GST System in Australia

This section provides an overview of the Good and Services Tax, how it being distributed, and its broader significance to the WA and Commonwealth Governments' finances.

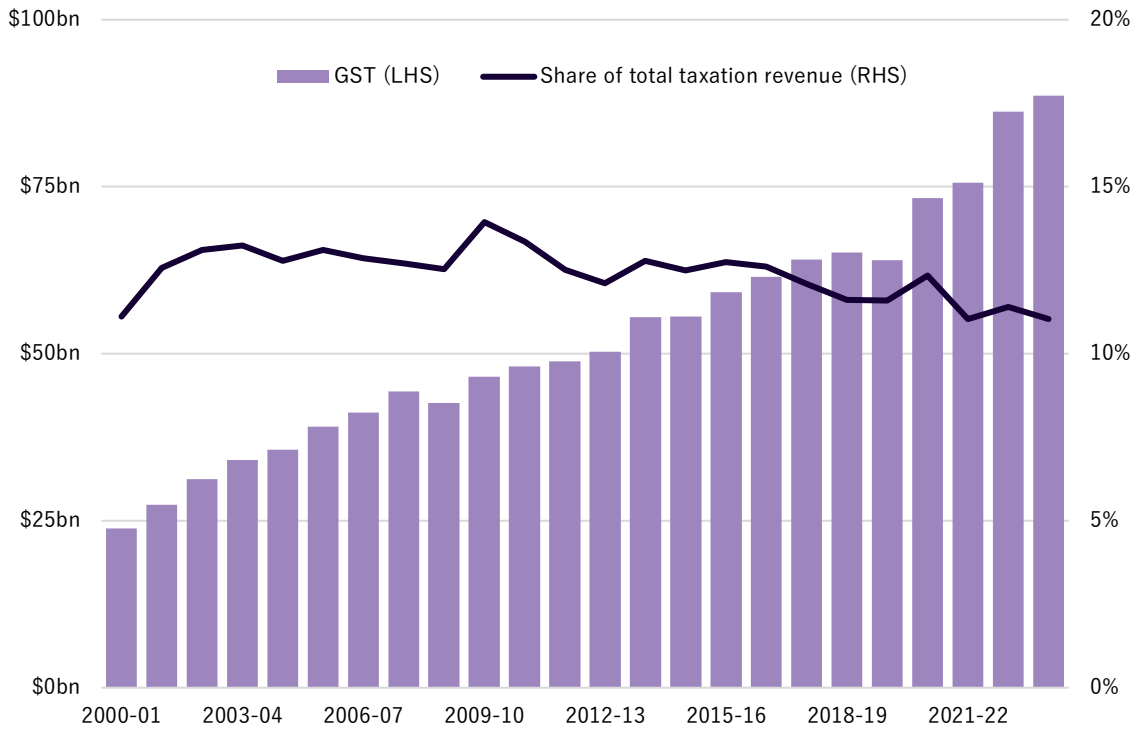
2.1 The Goods and Services Tax

The Goods and Services Tax (GST) is a 10% value-added tax applied to many goods and services sold or consumed in Australia. There are some goods and services exempt from the tax, including basic food items, medical and education services. The GST was introduced on 1 July 2000 as a broad-based consumption tax designed to simplify the Australian tax system.

Prior to the GST, Australia had a complex mix of Commonwealth wholesale sales taxes and other State-based levies, which were administratively burdensome and often inequitable.[1] The GST replaced these taxes with a single, consistent tax, ensuring that most goods and services are taxed in a transparent and uniform way. By broadening the tax base, it also provided government with a more stable and reliable source of revenue.

Over the past 25 years, the GST has become a cornerstone of Australia's public finances, representing around 12% of total taxation revenue raised across all levels of Government (**Figure 2.1**). In 2023-24, the Commonwealth Government collected $89 billion in GST, nearly quadruple the $23.9 billion collected in its first year, 2000-01.

Figure 2.1 Total Goods and Services Tax Revenue Generated, $bn and share of total taxation revenue



Source: Australian Bureau of Statistics

[1] Commonwealth Department of Treasury (1998). *Tax Reform: Not a New Tax, A New Tax System* [accessed on 6 November 2025]

The GST plays a central role in public finance in Australia. It is the source of funding which is used to address two core features of Australia's system of Federal-State Financial Relations: reducing Vertical Fiscal Imbalance (VFI) and addressing Horizontal Fiscal Equalisation (HFE).

2.2 GST Distribution in Australia: Horizontal Fiscal Equalisation

Australia is a federation of eight States and Territories with diverse economic, social and geographic circumstances, which affects both the cost of delivering public services and the capacity to raise revenue. Federal-State Financial Relations in Australia are characterised by a high level of Vertical Fiscal Imbalance (VFI), which occurs when one level of Government generates more (or less) revenue than it requires to deliver on its assigned expenditure responsibilities.

In Australia's case, the VFI exists between the Federal (Commonwealth) Government and the Sub-national (States and Territories) Governments, with the Commonwealth generating substantially more revenue than required to fund services it is responsible for; the States and Territories face the reverse situation, where they have less revenue than required to meet their expenditure responsibilities.

VFI and the diverse circumstances faced by Australia's States and Territories collide through the system known as Horizontal Fiscal Equalisation (HFE). This system seeks to equalise the financial capacity of all of Australia's States and Territories to provide a similar level of services to its citizens.

HFE is funded by the GST collected by the Commonwealth Government. Each year, the national "GST pool" is distributed by the Commonwealth Government to the States. GST revenue is the most significant component of general revenue assistance provided by the Commonwealth, and is a particularly important funding source because it is untied, allowing States to allocate it according to their own budget priorities.

The distribution of GST is guided by advice from the Commonwealth Grants Commission (CGC), which is tasked with ensuring that each State has the fiscal capacity to provide services at comparable standards. Since the introduction of GST, the CGC has been directed to follow principles of HFE when making its annual recommendations on how GST should be distributed.

The overarching principle of HFE is simple: it aims to balance differences in each State's population, expenditure needs, and revenue-raising capacity so that all States can provide a similar standard of services and infrastructure. These assessments aim to be made on a policy-neutral basis, to account for different policies across States. The goal is to ensure jurisdictions cannot increase their GST share by, for example, raising less revenue or spending more. As a result, States deemed to have a stronger revenue-raising capacity receive less GST on a per-capita basis, while those deemed to have weaker capacity to generate revenue receive more.

Current System of Distribution

While the general principle of HFE is straightforward and broadly supported by the States, its implementation has often been controversial. The current GST distribution system has been in place since 2018, following changes legislated through the *Treasury Laws Amendment (Making Sure Every State and Territory Gets Their Fair Share of GST) Act 2018*. This marked the most significant reform to GST distribution since the tax was introduced in 2000.

Prior to the 2018 reforms, the objective of HFE was to achieve **full equalisation**, meaning each State's fiscal capacity was effectively raised to match that of the strongest State. States with lower fiscal capacities were allocated more GST so they could provide services at the same standard as the State with the strongest fiscal capacity.

In 2017, the Productivity Commission was tasked with reviewing the HFE system amid growing concerns that it was no longer delivering the best outcomes for the Federation.[2] The Commission's inquiry noted that Australia was the only OECD country with a Federal Government that sought to **fully** eliminate disparities in fiscal capacity between sub-national Governments, and that it had been largely successful in doing so – although this came at the expense of economic efficiency and transparency.

In particular, it found that the approach to equalisation discouraged States from pursuing major tax reforms and economic development opportunities, especially in mineral- and energy-rich jurisdictions since this may reduce their GST share. The approaches adopted to assessing the relative fiscal capacity of each State ultimately meant States did not fully retain the fiscal benefits of their policy efforts, meaning the system was not fully policy neutral. This undermined incentives for productive reform and raised concerns about fairness, contributing to declining public confidence in the system.

The Commission also observed that the HFE system had become increasingly complex and difficult for the public, and even many policymakers, to understand. The processes underpinning GST distribution were viewed as opaque, and the year-to-year volatility in relativities – particularly for Western Australia during and following the mining construction boom – eroded public confidence in the system.

2018 Reforms

The 2018 reforms were the Commonwealth Government's response to the Productivity Commission review of the HFE system. These reforms replaced full equalisation with **reasonable equalisation**, which ensured that States have the fiscal capacity to provide **comparable services** up to the level of a 'standard' State. This was defined as the fiscally stronger of New South Wales or Victoria.[3] This ensures that no State receives less GST per person than the standard State. Therefore, if any State is fiscally stronger than the standard State, its GST relativity will be increased to the relativity of the standard State.

A move from full equalisation to reasonable equalisation is a significant economic reform in its own right, and a direct response to the findings and directions of the Productivity Commission's 2018 Review report.

Alongside the main 2018 reform of adopting a reasonable equalisation standard, the Commonwealth Government also decided to introduce a **GST Relativity Floor**, guaranteeing a minimum GST relativity which would apply to all States following the CGC's calculation of actual GST relativities. The floor was set at 0.70 from 2019-20 through 2023-24, and increased to 0.75 from 2024-25 onwards.[4] This aspect of the reforms ensures that States with strong fiscal capacity receive a minimum GST allocation.

The GST Relativity Floor was initially funded by a direct payment from the Commonwealth Government to any State or Territory which was entitled to receive the benefit of the mechanism. From 2022-23 onwards the floor was mathematically funded through modifications to the GST distribution.

These reforms have been phased in over a six year period. In the first instance, the CGC calculates the individual State distribution relativities under the pre-reform full equalisation system, and the new reasonable equalisation system. Then, it applies a transition formula which is based on 1/6th increments each year during the transition: 1/6 new, 5/6 old in the first year (2021-22), 2/6 new, 4/6 old in the second year, and so on. The final year of the transition is 2026-27, where the relativities will be determined using the new reasonable equalisation system.

Once the relativities are determined the CGC assesses whether there is a need to adjust any individual State's relativity up to the floor, and in turn reduce the effective relativities of other States to compensate.

[2] Productivity Commission (2018). *Horizontal Fiscal Equalisation, Report no.88*

[3] Commonwealth Grants Commission (n.d.). *New arrangements for distributing GST* [accessed on 6 November 2025]

[4] Ibid.

Any reforms to HFE, by the zero-sum nature of the distribution mechanism, create "winners and losers" amongst the States and Territories. Delivering any reform to distribution which sees additional revenue allocated to one State or Territory *ipso facto* results in a reduction for all other States and Territories.

To support the transition to the new system, the Commonwealth decided to implement a **No Worse Off Guarantee** (NWOG).[5] The NWOG is an additional payment made by the Commonwealth Government which fully offsets the reduced GST grant revenue allocated to any State or Territory which otherwise would have seen a reduction in its revenue owing to the economic reforms to the HFE system identified above. The NWOG was due to expire in 2026-27 (the final year of the transition to the new system) but was extended to 2029-30 in December 2023.

This functionally means every State and Territory is either better off, or no worse off, on a direct financial basis as a result of the reforms. This also means the direct fiscal burden of the economic reforms has been borne by the Commonwealth Government.

[5] Ibid.

2.3 Role of GST in WA Public Finances

Western Australia's public finances are in many ways subject to the whims of HFE and VFI, due to the interplay between the size and scale of the GST in Australia's Federal Financial Relations, and the influence of Western Australia's unique financial architecture on the process of HFE.

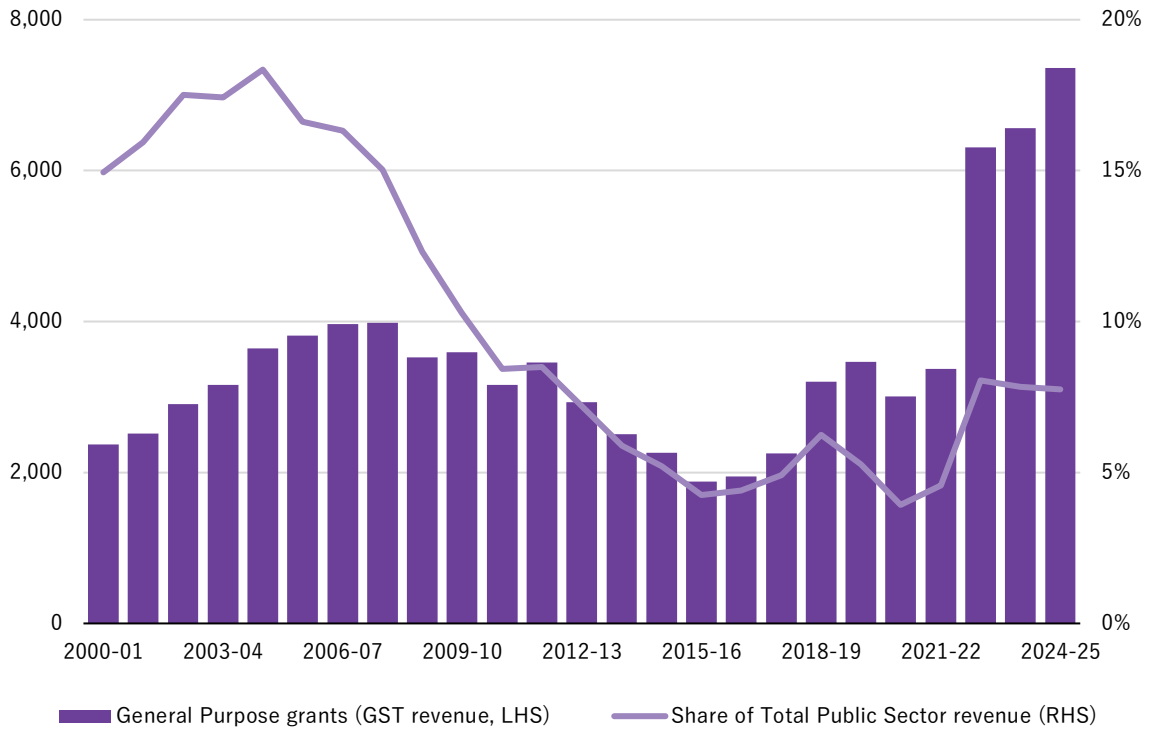
GST, Royalties, and WA's Fiscal Capacity

The GST is a critical revenue stream for the Western Australian Government. The GST revenue accounted for around 15% of total public sector revenue in Western Australia in 2000-01, rising to as high as 18% by 2004-05 (**Figure 2.2**).

The mining construction boom, associated increase in minerals industry production (particularly in the iron ore industry), and for-the-time record commodity prices conspired to see an extraordinary uplift in Western Australia's mineral royalty revenue. Royalty revenue increased from 4.4% of Total Public Sector revenue in 2000-01 ($701 million of a total revenue base of $15,893 million) to a high of 14.1% in 2013-14 ($6,025 million of a total revenue base of $42,630 million).

Western Australia's GST revenue began to decline in the late 2000s as the previous system of HFE began to recognise the surge in fiscal capacity enabled by the resources construction and production boom, resulting in a material reduction in the State's share of the GST pool. This decline persisted even after the resources boom slowed in the mid-2010s, largely due to the time lag in the CGC assessments. This placed significant pressure on the Western Australian Government, which was also facing the fiscal strain from falling commodity prices.

Figure 2.2 General Purpose grants (GST revenue) in Nominal $m, vs its share of Total Public Sector Revenue (% of total)

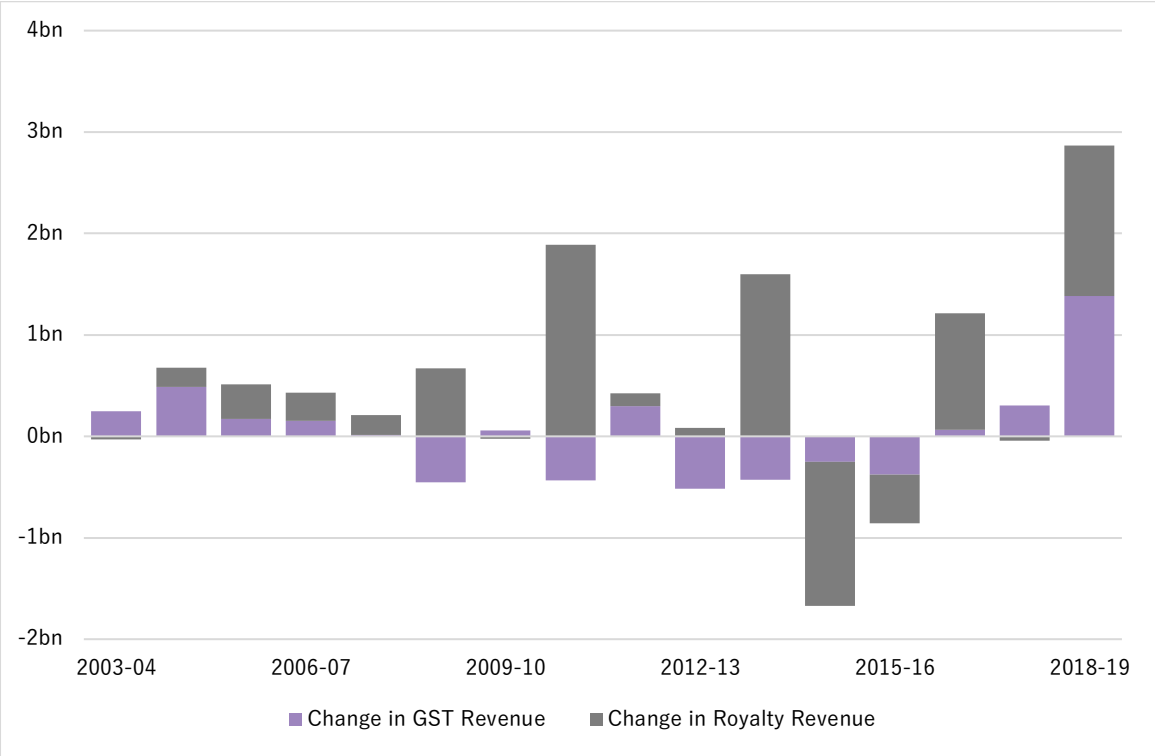


Source: WA Department of Treasury and Finance

The impact of HFE, and interaction with the State's mining royalties, is illustrated below (**Figure 2.3**). The chart shows the change in annual nominal GST revenue and royalty revenue in the period 2003-04 to 2018-19 (immediately prior to the 2018 reforms taking effect). Between 2009-10 and 2015-16, Western Australia's aggregate nominal revenue from these two critical sources of State revenue increased by a total of $129 million[6], while total operational expenditure increased by $6.2 billion. In 2009-10, the State's General Government Net Operating Balance was $831 million.

The pattern of change in revenue also demonstrates the inherent volatility and uncertainty of the previous system in practice. The State's royalty revenue fluctuated significantly from year to year, rising and falling in an effective range of $4 billion over this period. Despite this the State's annual change in GST grant revenue was negative in every year except one, in 2011-12.

Figure 2.3 Change in GST grant revenue and royalty revenue, Western Australian General Government, $bn nominal by year (2003-04 to 2018-19).



Source: ACIL Allen

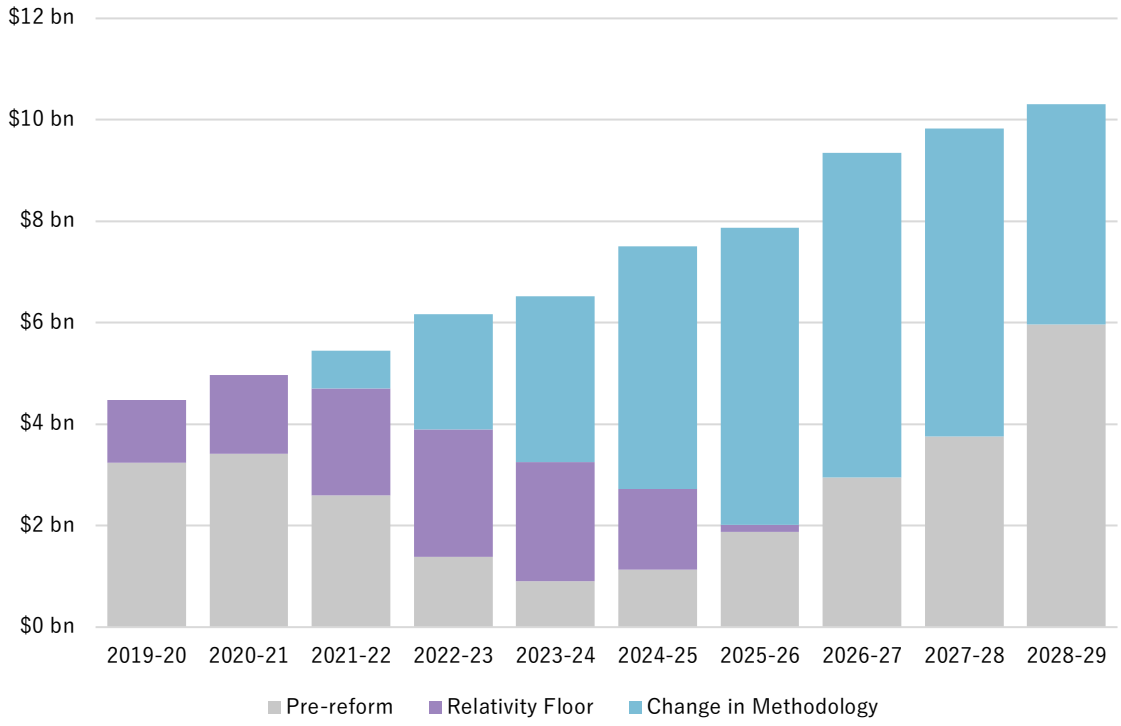
[6] That is, in 2009-10 the combined revenue from GST grants and mineral royalties was $5,913 million, and in 2015-16 this value was $6,006 million.

HFE Reforms and Impact on WA's GST Grant Revenue

The 2018 reforms have provided a significant increase in Western Australia's fiscal capacity since they were implemented. Modelling from DTF suggests the 2018 GST distribution reforms have provided an additional $22.4 billion in revenue to the Western Australian Government to the end of 2024-25.

The introduction of the relativity floor was the key stabilising factor for WA's GST revenue, particularly in the first few years after the reforms, as the previous methodology would have led to further declines in the State's GST relativity (**Figure 2.4**).

Figure 2.4 GST Revenue to Western Australia, Pre-reform (grey) vs Impact of Individual Streams of Reform / Commonwealth Government Funding Decisions, $bn nominal dollars



Source: ACIL Allen, from WA Department of Treasury and Finance

As highlighted in the chart, Western Australia's current level of GST revenue is materially higher than what would have otherwise been received had the pre-2018 reform HFE system been maintained. The modelling prepared by the DTF suggests the Western Australian Government has received and is expected to receive **an additional $45.2 billion** in GST revenue between 2019-20 and 2028-29 – an increase from $27.2 billion to $72.5 billion. Even with the reforms, Western Australia will still subsidise the other States by $23.6 billion over this same period relative to an equal per capita distribution.

The introduction of a Relativity Floor is often perceived to be the driver behind the State's higher allocation of the GST. However, this analysis and modelling demonstrate that this perspective is misguided as it is the **Commonwealth Government's economic reform** to move away from full equalisation to a Productivity Commission-endorsed system of reasonable equalisation which is driving the benefits to Western Australia. This measure accounts for $33.7 billion of the additional revenue flowing to Western Australia, or 74% of the total benefit.

Despite the substantial uplift, it is important to note that Western Australia's GST relativity remains at a level which sees the State act as a net contributor to the overall HFE task across Australia. The Department estimates Western Australia would be entitled to around an additional $2.5 billion per year of GST revenue under an equal per capita distribution arrangement (i.e. if Western Australia's GST relativity was set at 1.0).

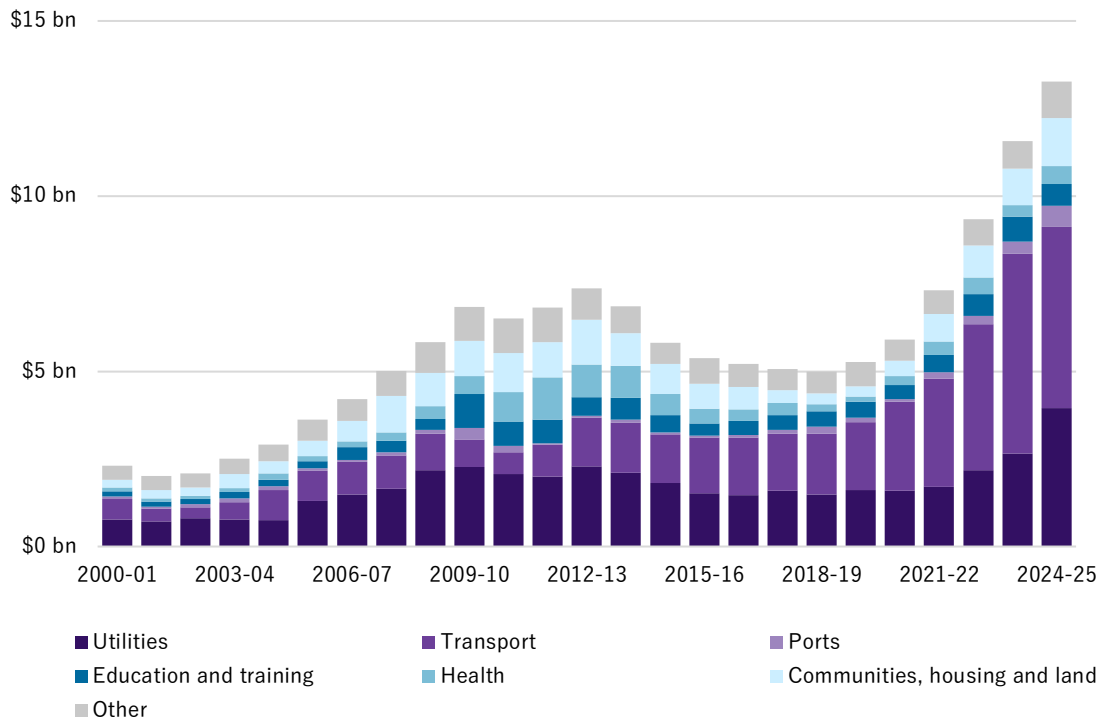
State Finances Since the 2018 Reforms

Following the 2018 reforms, the uplift in GST revenue helped stabilise the State's net debt trajectory and strengthen its fiscal position. This improvement was reflected in the reinstatement of WA's AAA credit rating by S&P Global in 2022 and Moody's in 2023 – ratings reserved for borrowers of the highest quality with minimal risk of default. In fact, WA is now one of only a small number of jurisdictions globally, and the only Australian State, to hold the highest possible credit rating from both major agencies.[7]

With its more stable revenue base and balanced fiscal capacity, the WA Government has been able to reorient expenditure toward longer-term priorities, including economic development and major infrastructure investment. This dynamic is reflected in the Asset Investment Program (AIP), which is now at record levels supported in large part by the fiscal capacity of the 2018 reforms.

In recent years, the WA Government has committed to a record AIP, a large share of which is focused on economic infrastructure, such as electricity, water, transport, and port infrastructure. For the decade leading up to the 2018 reforms, investment in utilities, transport, and ports accounted for 54% of the State Government's infrastructure spending (**Figure 2.5**). Since then, their share has risen to 72%, which has been enabled by the increased financial capacity from the 2018 reforms. It is noted a large share of this itself is driven by the Western Australian Government's public transport network expansion program.

Figure 2.5 WA's Asset Investment Program



Source: WA Department of Treasury and Finance

[7] WA Government (2025). *Moody's reaffirms Western Australia's AAA credit rating* [accessed on 7 December 2025]

3 GST Distribution Reform Impacts in Western Australia

This section of the report presents ACIL Allen's assessment of the direct financial and economic impacts of the HFE reforms on the Western Australian, Commonwealth and other State and Territory Governments across Australia. This serves as a summary of the methodology for the economic impact analysis contained in the next section of the report.

3.1 Overview

The HFE reforms delivered by the Commonwealth Government and enacted from 2019-20 onwards have led to a significant impact on the revenue stability and fiscal capacity of the Western Australian Government.

Modelling by ACIL Allen informed by inputs from the DTF suggests the Western Australian Government is estimated to receive an additional $45.2 billion of GST revenue between 2019-20 and 2028-29, with additional financial benefits and impacts flowing downstream of this. These are described in detail in this section.

Determining the impacts of the HFE reforms requires a thorough and logical consideration of a counterfactual case which cannot be directly observed: once the GST revenue is made available to the State, it becomes part of the general State Budget process and spending decisions are unable to be directly attributed to the reforms.

This section of the report presents ACIL Allen's modelling framework and analysis of the direct impacts of the HFE reforms on the finances of the Western Australian Government and Commonwealth Government (and the other States and Territories noting this is effectively zero). The section discusses and presents ACIL Allen's approach to quantifying the economic impacts of any additional spending or other changes fostered by the reforms in Western Australia, as a precursor to the economic impact analysis presented in the next section.

3.2 Estimating a Counterfactual Case

Observing the impacts and outcomes of the GST Distribution Reforms on the Western Australian and national economies is not straightforward, as it requires consideration of a **comprehensive counterfactual analysis**. This counterfactual analysis must consider the impacts and implications of:

- the change in flow of funds from the Commonwealth Government to the Western Australian Government
- how the change in the flow of funds impacted on the Commonwealth Government's tax, spending and balance sheet decisions
- how the change in the flow of funds impacted on the Western Australian Government's tax, spending and balance sheet decisions
- the direct flow on economic and other impacts of these changes.

This requires ACIL Allen to build an ex-post reaction function which credibly accounts for how both Commonwealth and Western Australian Governments took certain decisions to tax, spend, invest and / or

borrow as a result of the changes to HFE and associated policy choices by the Commonwealth Government to leave no State and Territory worse off as a result of the reforms.[8]

The Counterfactual Case

At a headline level, the HFE reforms have created additional financial capacity for the Western Australian Government, through additional GST revenue. This additional financial capacity becomes part of the Western Australian Government's Budget, and associated decision-making with respect to revenue, expenditure, and balance sheet management. However, this comes at a cost to the Commonwealth Government, which is correspondingly more constrained in its spending and financial management.

In effect, the counterfactual case requires **these decisions to be unwound**, or removed from the actual data which is observed in the financial outcomes of the respective budget papers. This in turn results in a restated financial position of the Western Australian Government and Commonwealth Government. This restatement is presented in the following section.

Determining the counterfactual case in this analysis requires an informed judgement of decisions the Western Australian Government, Commonwealth Government, and other States and Territories are likely to have taken in response to the HFE reforms, and reversing the direct impacts of these on their respective Budgets. The further flow on benefits and impacts of these decisions are then considered and quantified.

Western Australian Government

For the Western Australian Government, ACIL Allen worked with the DTF to assess a range of **expenditure and taxation decisions** which were taken between the 2018-19 State Budget (the last State Budget or Mid Year Review prior to the announcement of the reforms) and 2025-26 Mid Year Review (the latest available fiscal statement). This review centred on developing a consistent and logical approach to determining projects which were more likely to have been funded / decisions which were more likely to have been taken as a result of the additional fiscal capacity flowing from the reforms.

This has centred on:

- Identification of a range of **economic infrastructure projects**, where the State has taken an investment decision in a space where it may typically wait for private capital, or not invest at all
- Identification of project expenditure where the State Government has taken **pro-active or pre-emptive investment** to capture an economic development or other public policy opportunity
- Taxation decisions directly targeted at **supporting employment** or providing **tax relief to the private sector**

If the HFE reforms were not in place, the Western Australian Government would receive $45.2 billion less in GST revenue from the Commonwealth over the period 2019-20 to 2028-29. It is, however, not credible to assume all of this additional fiscal capacity was invested in projects or other programs at the margin, as this would be the equivalent (for example) to the State's entire public sector AIP between 2019-20 and 2024-25.[9]

The modelling framework has identified the total direct value of the projects and programs funded as a result of the HFE reforms, which amounts to $22.8 billion over the financial modelling period. – lower than the overall increase in GST revenue.

The remainder of GST revenue uplift is assumed to be used to fund the balance of the State Budget not covered by the specific decisions described above. With this additional financial capacity, the Western

[8] This decision means from a direct financial perspective the States and Territories outside of Western Australia are assumed to have seen no net change to their public finances and public financial capacity. Indirect and flow on impacts are accounted for in CGE modelling, and are reported as part of the Rest of Australia level regional analysis.

[9] The Total Public Sector AIP is valued at $51.9 billion between 2019-20 and 2024-25.

Australian Government is able to underwrite these commitments without significantly increasing gross borrowings. This in turn results in avoided interest expenses which would otherwise require offsetting additional gross borrowings.

This is in part because the Western Australian Government would, broadly speaking, **continue to invest in social and other infrastructure** that is driven by a growing population, regardless of the fiscal capacity of the State. This means recent spending decisions regarding hospitals, schools, public transport investment, and social housing would most likely have taken place regardless of whether the HFE reforms took place or not.

Beyond this, there are a number of projects and programs where there was additional Commonwealth Government funding or other support (such as loans through various Commonwealth Government bodies) provided to deliver a project. It is assumed this funding would otherwise not have been provided to the Western Australian Government, nor would it have been expended by the Commonwealth Government. The total additional Commonwealth Government funding provided is estimated to be $1.1 billion over the modelling period.

Commonwealth Government

From a Commonwealth Government perspective, given the size of the Commonwealth Budget ($735.4 billion of expenditure in 2025-26), it is assumed the HFE reforms and associated incidence of the NWOG, the Commonwealth-Funded Floor, and GST Top Up payments made are accounted **through additional gross borrowings** by the Commonwealth Government. This in turn results in additional interest expenses, which accumulate as further gross borrowings.

As outlined in the previous section, the various HFE reform-related decisions made by the Commonwealth Government have resulted in $45.5 billion of additional actual and forecast expenditure in the Commonwealth Budget between 2019-20 and 2028-29, comprising:

— $32.9 billion in the NWOG,

— $7.4 billion in the National GST Pool Boost (GST Top Up payments), and

— $5.2 billion in Commonwealth-funded Floor payments (between 2019-20 and 2021-22)

This is the equivalent of 0.6% of total Commonwealth Government receipts over the same period. Based on DTF analysis, this is a fraction of Western Australia's net contribution to the Commonwealth, which is the highest per capita in the nation.

Other States and Territories

ACIL Allen has assumed no net change to the direct revenue, expenditure or balance sheet decisions made by other State and Territory Governments as a result of the HFE reforms. This is because of the impact of the Commonwealth Government's various additional expenditure decisions made as a consequence of the reforms, including the NWOG and the additional GST revenue made available via the National GST Pool Boost.

In reality, DTF has advised there are some minor variations in grants paid to the other States and Territories which occurred as a result of the reforms, including:

— An additional $252 million to the Northern Territory Government in 2019-20

— Shift of $19 million of payments to the Tasmanian ($5m) and Northern Territory ($14m) Governments from 2022-23 to 2021-22, as a result of a timing issue in the NWOG payment

ACIL Allen has set these aside from consideration and treats the revenue, expenditure and balance sheet decisions of the other State and Territory Governments as neutral in both cases.

3.3 Financial and Expenditure Impacts

The direct financial and expenditure impacts of the reforms on the Western Australian and Commonwealth Government's budgets and overall financial position are described in greater detail below.

Individual Government Analysis

Western Australian Government

ACIL Allen's accounting of the impact of the HFE reforms on the Western Australian Government's operating financial position, across the 2019-20 to 2028-29 period, is presented below (**Figure 3.1**).

Figure 3.1 Aggregate Financial Impacts on Western Australian State Budget from HFE Reforms, ACIL Allen Estimates and Modelling, 2019-20 to 2028-29, $bn (nominal dollars)

Source: ACIL Allen

Overall, ACIL Allen estimates the Western Australian Government's financial capacity has increased by $49.3 billion between 2019-20 and 2028-29. This increase in financial capacity comprises:

- $45.2 billion of additional GST revenue as a consequence of the HFE reforms
- $1.1 billion of additional Commonwealth Government funding and supports tied to the investment and program expenditure decisions taken by the Western Australian Government as a result of the additional financial capacity above
- $3.1 billion of avoided consequential additional borrowings to account for higher interest expenses in lieu of the additional financial capacity above.

Within the additional financial capacity resulting from the 2018 HFE reforms, ACIL Allen estimates that the Western Australian Government has:

- Provided $0.5 billion of taxation relief through a permanent increase to the payroll tax exemption threshold
- Invested an additional $18.5 billion in economic infrastructure designed to increase the efficiency and productivity of the Western Australian economy, of which $6.5 billion has flowed to additional road network investment and $12.0 billion to various other economic infrastructure investments
- Spent an additional $3.8 billion on economy-centric programs such as training, project activation and support, and direct local economic expenditure in line with various public policy and strategic objectives
- Avoided $26.6 billion of gross borrowings, of which $23.5 billion is accounted for as the difference between the HFE reform dividend and the spending decisions outlined above, and $3.1 billion in avoided interest expenses and associated balance sheet impacts.

ACIL Allen has restated the Western Australian Government's aggregate (Total Public Sector) financial statements based on the impacts and timing of the receipts and payments associated with the reforms, and the impacts on State debt and interest expenses. A visual summary of the impacts is provided on the following page (**Figure 3.2**).

In the absence of the HFE reforms, Western Australia's Total Public Sector Net Debt position is projected to be $74.4 billion to fund the associated program and expenditure decisions outlined above, a deterioration of $31.9 billion over the projected 2028-29 position incorporating the reforms. As a result, the Western Australian Government will have spent $3.1 billion more on interest payments over time.

ACIL Allen's modelling also suggests the State's:

- Net debt to revenue ratio would be 77.7%, instead of the DTF-projected 45.5%, in 2028-29
- Interest expense to revenue ratio would be 4.0%, instead of the DTF-projected 3.0%, in 2028-29
- Net debt to Gross State Product ratio would be 12.2%, instead of the DTF-projected 8.6%, in 2028-29

Figure 3.2 Financial Impacts of HFE reforms on WA Government Finances, Including Changes to Expenditure / Asset Investment, By Year, $m (nominal terms)

Source: ACIL Allen

A more detailed accounting of the projects and programs expenditure decisions taken by the Western Australian Government and incorporated into this analysis is presented in Section 3.4.

Commonwealth Government

The Commonwealth Government's total actual and forecast additional expenditure commitments associated with the HFE reforms are outlined below. Overall, the analysis suggests the Commonwealth Government has spent an additional $45.5 billion between 2019-20 and 2028-29, spread across the three programs:

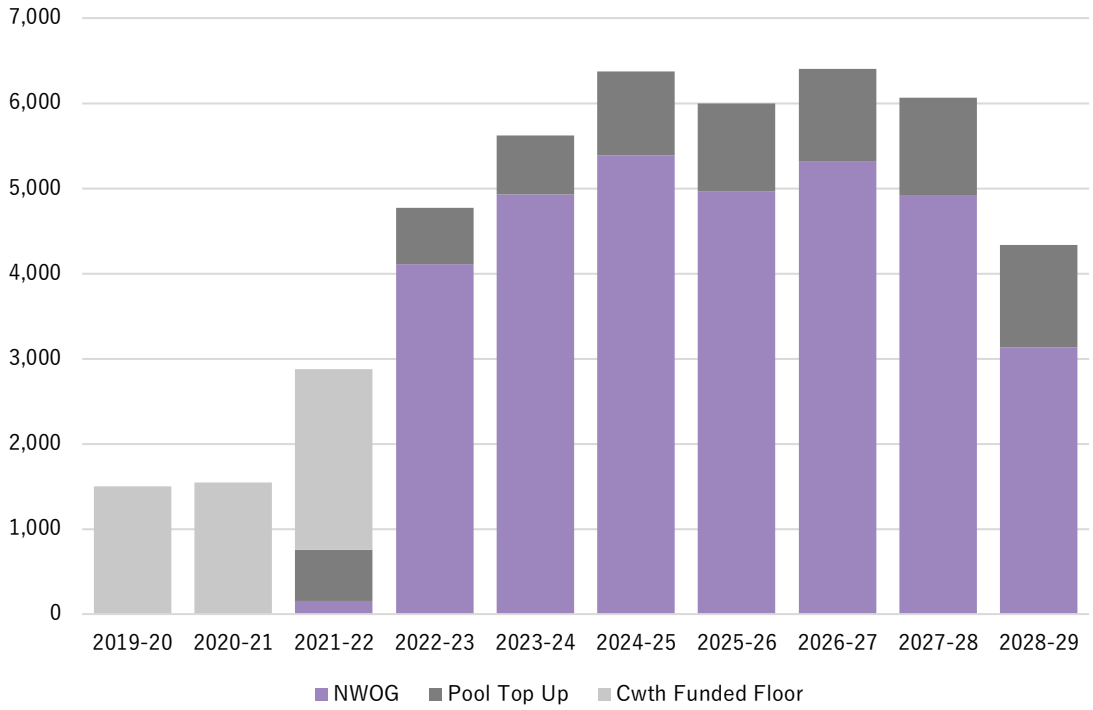
— $32.9 billion in the NWOG,

— $7.4 billion in the National GST Pool Boost (GST Top Up payments), and

— $5.2 billion in Commonwealth-Funded Floor payments (between 2019-20 and 2021-22)

Beyond this, ACIL Allen estimates the Commonwealth Government has invested an additional $1.1 billion in major economic infrastructure and programs in Western Australia on a co-funding basis with the Western Australian Government, which is additive to the HFE reform expenditures presented above. This takes the total direct expenditure estimated to be attributable to the HFE reforms within ACIL Allen's framework to $46.5 billion over the 10 years of the financial modelling period.

Figure 3.3 Total Additional Direct Commonwealth Government Expenditure to Deliver HFE Reforms, by Expenditure Line, $m (nominal dollars)



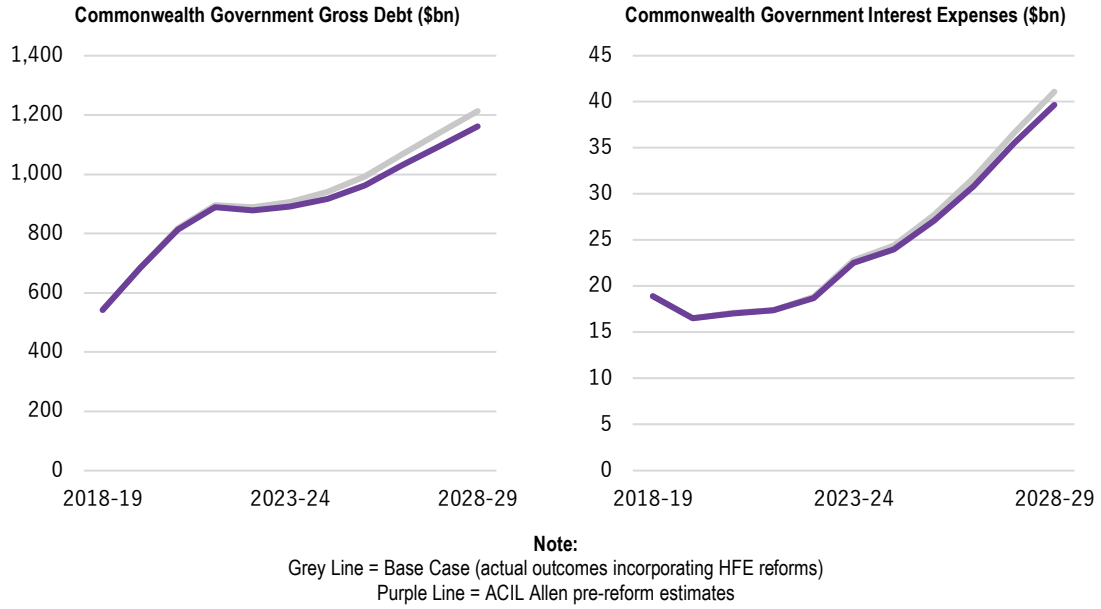
Source: Department of Treasury and Finance, ACIL Allen

In line with ACIL Allen's impact framework, this additional expenditure is assumed to have required additional gross borrowings by the Commonwealth. This in turn results in additional interest expenses, which have a consequential impact on the level of borrowings. ACIL Allen estimates the decisions made by the Commonwealth flowing from the HFE reforms have added $51.5 billion to Commonwealth gross debt by the end of the financial modelling period. This would mean the reforms have added an estimated 4.4% to gross Commonwealth Government debt on issue.

The estimated additional debt issuance results in additional interest expenses for the Commonwealth Government. ACIL Allen estimates the Commonwealth Government has incurred and will incur an additional $5.0 billion of interest expenses between 2019-20 and 2028-29 as a result of the additional borrowings required to meet its decisions with respect to the HFE reforms, or $500 million per annum.

The profile of ACIL Allen's estimated impact of the Commonwealth Government's decisions related to the HFE reforms is provided below (**Figure 3.4**).

Figure 3.4 Estimated Impact of Commonwealth Government Expenditure Decisions Related to HFE Reforms, Gross Debt and Interest Expense, $bn (nominal)



Source: ACIL Allen

Other States and Territories

As discussed in Section 3.2, the direct financial impacts on other States and Territories have been ameliorated as a result of Commonwealth Government decisions with respect to the NWOG and GST Pool Top Up payments (minus some minor impacts at the margin for two States). As a result, there is no analysis of the direct financial impacts on other States and Territories.

Combined National Direct Fiscal Impact of Reforms

The combined National Direct Fiscal Impact of the HFE reforms and associated Commonwealth Government expenditure decisions reflects the combined counterfactual analysis of the Western Australian and Commonwealth Government's financial positions as presented in the previous sections.

Overall, ACIL Allen's analysis finds the combined Commonwealth and State Government fiscal position impacts of the reforms total:

— An increase in total gross debt issued of $25.0 billion by 2028-29. This accounts for ACIL Allen's estimate that the Commonwealth Government's expenditure decisions to support the HFE reforms have increased its gross borrowings by $51.6 billion, while the associated HFE reform dividends to the Western Australian Government have reduced its gross borrowings by $26.6 billion.

— An increase in total interest expenses of $1.9 billion over the period 2019-20 to 2028-29. This accounts for ACIL Allen's estimate that Commonwealth Government interest expenses are $5.0 billion higher over the modelling period as a result of its expenditure decisions to support the HFE reforms, offset by a reduction in Western Australian Government interest expenses of $3.1 billion. The relatively modest change in interest expenses relative to change in debt reflects the higher interest rate on Western Australian Government borrowings (3.4% in 2024-25) compared to Commonwealth Government borrowings (2.6% in 2024-25).

Both values are ACIL Allen estimates applying the methodology described above.

In effect, ACIL Allen's direct fiscal impact analysis suggests the HFE reforms and associated fiscal decisions made by both the Commonwealth Government (to introduce the NWOG and GST Pool Top Up payments, alongside the Commonwealth-funded floor payments in the first three years of the reform period) and the Western Australian Government have resulted in $25 billion of additional gross borrowings across the two entities.

Within this:

— $22.8 billion[10] has been spent or invested by the Western Australian Government on economic infrastructure and other economic development activities in Western Australia,

— $1.9 billion has been spent on net interest payments (reflecting the difference between actual Commonwealth Government interest and ACIL Allen's modelling of the avoided interest costs on Western Australian Government borrowings), and

— $252 million was provided to the Northern Territory Government as an untied grant in 2019-20 as part of the Commonwealth-Funded Floor payments.

The next section describes the projects and programs funded by the Western Australian Government as a result of the additional fiscal capacity associated with the reforms, and how the benefits of these have been quantified to act as an input for Computable General Equilibrium modelling.

3.4 Project Investment and Expenditure

ACIL Allen worked with the DTF to review a range of Western Australian Government budget spending and capital investment decisions to determine a reasonable basis for quantifying the economic benefits of the additional fiscal capacity created by the HFE reforms.

As outlined in Section 3.2, this has centred on:

— Identification of a range of **economic infrastructure projects**, where the State has taken an investment decision in a space where it may typically wait for private capital, or not invest at all

— Identification of project expenditure where the State Government has taken **pro-active or pre-emptive investment** to capture an economic development or other public policy opportunity

— Taxation decisions directly targeted at **supporting employment** or providing **tax relief to the private sector**

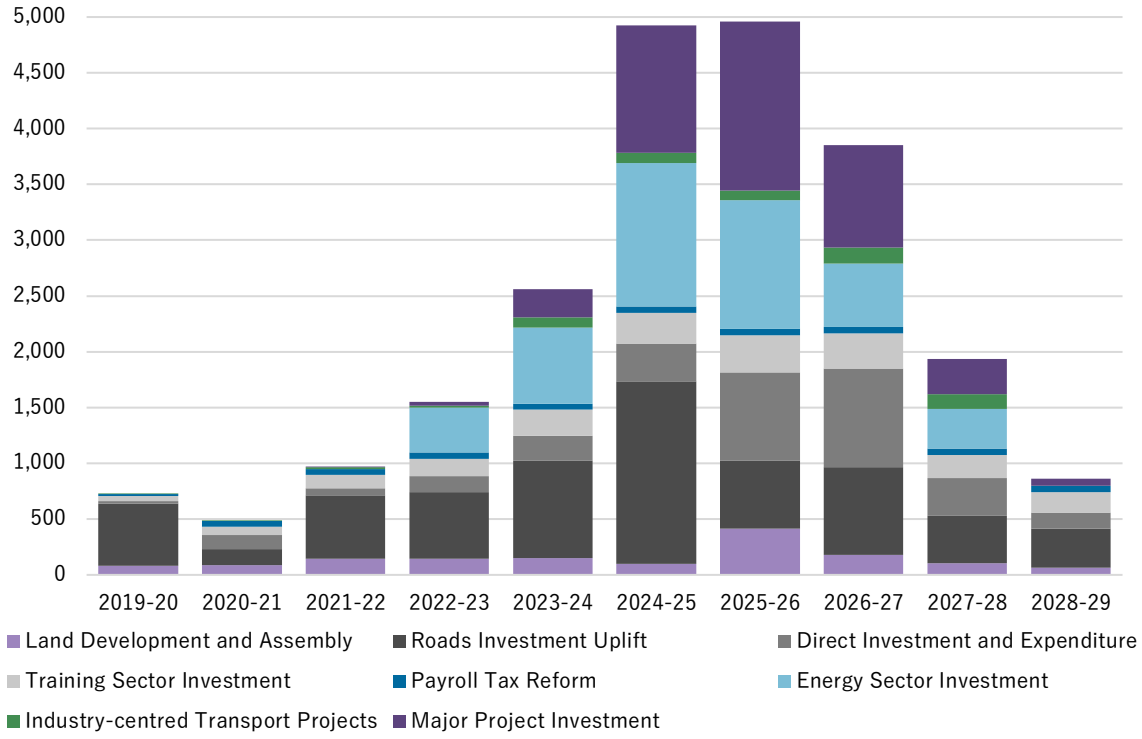
This process resulted in the identification of 96 projects spanning the full scope of the Western Australian Government's activities, investments and expenditure. This includes investments made by 20 agencies and Government Trading Enterprises (GTEs).

[10] This includes the financial benefits associated with co-investment in some projects by the Commonwealth Government, worth ~$1.1 billion in direct financial provision noting some of this investment is via debt financing which will be repaid by the Western Australian Government in the years ahead.

Projects Summary

ACIL Allen aggregated these projects into seven categories, reflecting common purpose or objective, breaking this further into operational expenditure and investment via the AIP. The headline profile of this expenditure is provided below (**Figure 3.5**).

Figure 3.5 Western Australian Government Investment in Economic Infrastructure, Programs and Tax Initiatives During HFE Reform Period, $m by Program Area (nominal dollars)



Source: ACIL Allen

As indicated in the figure, the program of investment and expenditure is broken up as follows:

- Land Development and Assembly: $1.5 billion
- Roads Investment Uplift: $6.5 billion
- Direct Investment and Expenditure: $3.1 billion
- Training Sector Investment: $1.9 billion
- Payroll Tax Reform: $0.5 billion
- Energy Sector Investment: $4.4 billion
- Industry-centred Transport Projects: $0.6 billion
- Major Project Investment: $4.3 billion

Each of these program areas has a tailored methodology for estimating the direct benefits and impacts of the investments made by the State Government, as inputs into the CGE modelling. These are described in the next section.

Estimating Project Benefits

The additional $22.8 billion of investment projects and other program expenditure is projected to have a range of positive economic benefits to the Western Australian economy, and in turn the national economy, in the years and decades ahead.

These benefits are typically quantified on a project-by-project basis as part of the annual budget process and consideration by Government of the range of quantifiable and unquantifiable benefits and costs of State investment. Given the breadth of the projects and programs included in the scope of the study, ACIL Allen has developed **tailored quantification methodologies for each of the categories of investment and expenditure** to prepare the shocks required for the economic impact assessment.

The methodologies contained and described within this section are the "Conservative" methodologies. ACIL Allen has identified any modifications or changes to the methodology and associated parameters for the "Balanced" scenario in the CGE modelling in the relevant project benefit stream, at the end of the relevant section.

The approaches developed by ACIL Allen are described below.

Land Development and Assembly: $1.5 billion

The Land Development and Assembly Projects include 17 individual projects centred on purchase and / or activation of industrial lands across Western Australia. These projects have a total expenditure of $1.5 billion over the 10 year financial analysis period, peaking at $411 million in 2025-26.

Methodology

The challenge in quantifying the benefits and impacts of industrial land development and assembly is the need to avoid both double counting of benefits and the potential risk of assuming land purchases between entities are creating economic value versus transferring economic value from one party to another.

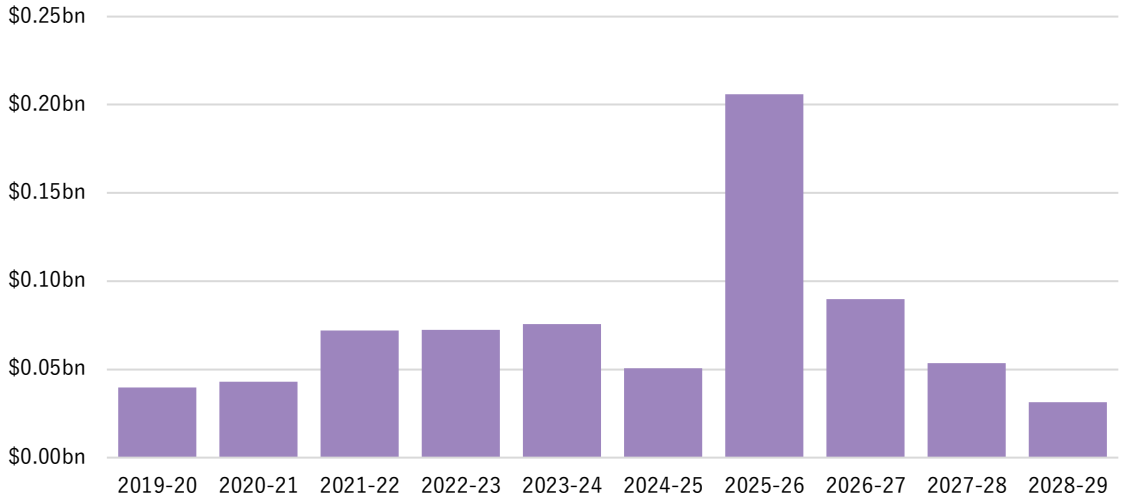
Avoiding double counting refers to the risk that if we assume the downstream benefits of land use (ie the projects facilitated on land which is developed by the State) are attributable to the act of developing the land in the first place. ACIL Allen therefore assumes there is no attributable economic activity which occurs downstream of the land development itself.

Removing the potential of accounting for transfers as economic value is more challenging as it would require detailed review of the individual land transactions which underpin the 17 programs which comprise this category. This information was not available. Therefore, as a conservative assumption, ACIL Allen has set aside 50% of the value of the projects which make up this category from consideration as inputs into the economic impact assessment.

From here, ACIL Allen assumes the remaining 50% of the value associated with this category of investments is spent in the civil construction industry within its CGE model. This results in economic impacts on the Western Australian and national economies.

The profile of this activity is provided below (**Figure 3.6**).

Figure 3.6 Project Benefits: Land Development and Assembly, $bn by year



Source: ACIL Allen

Additional Road Network Investment

The Additional Road Network Investment expenditure line reflects a parameterised assessment of the additional, extra-normal investment the Western Australian Government has delivered in Western Australia's road transport network as a result of the additional fiscal capacity flowing from the HFE reforms. These various projects, modelled as a single project line item, have a total expenditure of $6.5 billion over the 10 year financial analysis period, or $654 million per annum.

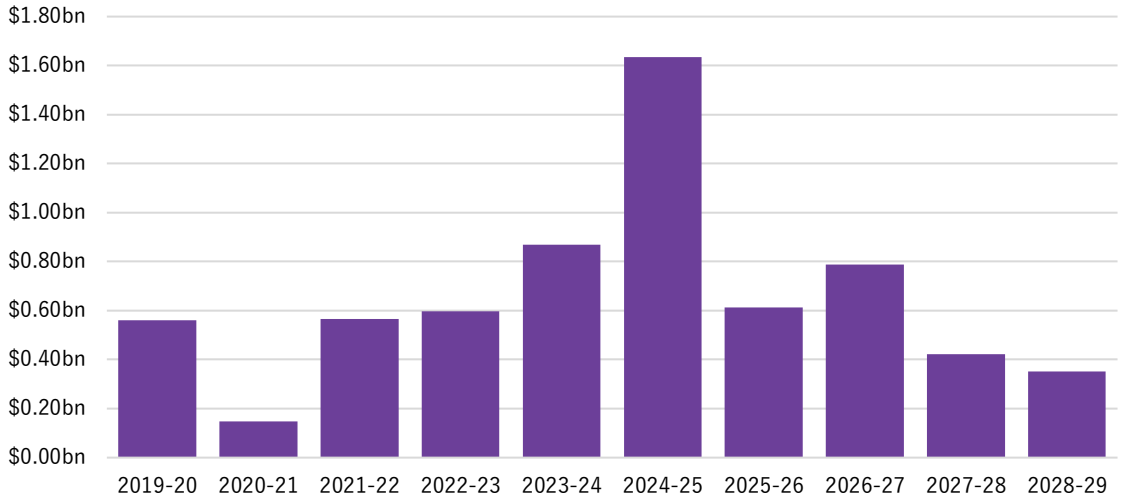
Methodology

The methodology for calculating the economic benefits of the Additional Road Network Investment is relatively simple. The first round effects of the investment are input as an expenditure shock into the modelling, under the premise that the spending by the Western Australian Government reflects actual contracted road network expenditure in each of the years of the modelling period.

From here, the value of the additional road network investment is imputed as additional capital stock for the Western Australian economy. This in turn increases the capital stock per worker in the impact analysis, resulting in medium term benefits to the productivity of the Western Australian economy. The quantification of this benefit is an outworking of the CGE model itself rather than input as a defined assumption (as some other projects described in this section have been quantified).

The profile of this activity is provided below (**Figure 3.6**).

Figure 3.7 Project Benefits: Road Network Investment, $bn by year



Source: ACIL Allen

Direct Investment and Expenditure: $3.1 billion

The Direct Investment and Expenditure include 36 diverse investments made by the Western Australian Government in a range of sectors and for a range of purposes. This is the largest number of projects in a single category within the framework.

Methodology

The Direct Investment and Expenditure category is similar to the Land Development and Assembly category in that the economic value associated with the category is centred on the act of spending or investing the money only – no structural or other changes to the State's economy are assumed to take place downstream of this investment.

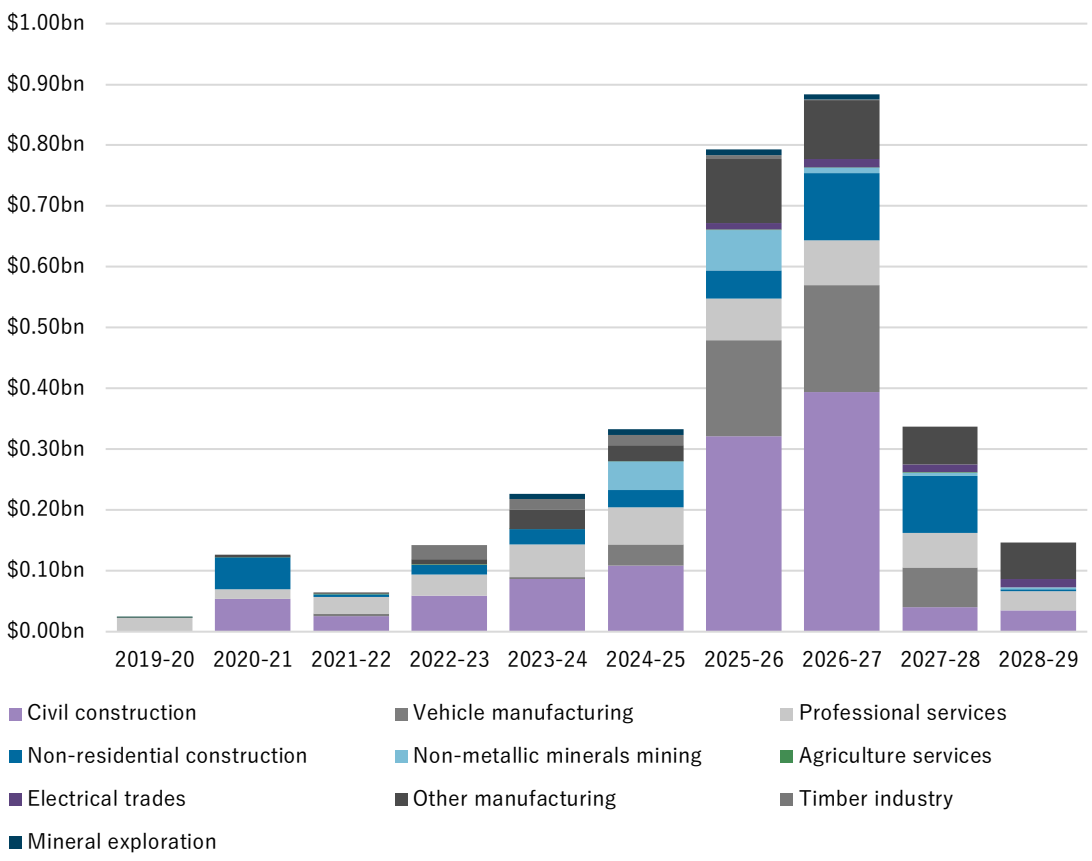
This is because of the sheer diversity of the projects and programs which comprise the category. A selection of the largest projects (>$100 million) assigned to this category is provided below:

- Goldfields Pipeline Renewal: capital expenditure by the Water Corporation to renew the Goldfields Pipeline which connects Perth's integrated water supply scheme to Kalgoorlie
- Made in WA - Electric Buses and Ferries: Procurement of locally manufactured buses and ferries, specifically powered by batteries
- Investment Attraction Fund: Ad-hoc investments made to support industrial attraction and initiatives across Western Australia
- Science Grants: Ad-hoc grants and investments made in research and science activities in Western Australia
- Collie Industrial Transition Fund: Ad-hoc investments made to support the transition of the Collie region away from coal and coal-fired power generation to new industries.
- Perth City Deal / ECU campus: Further State Government investment in activation of the Edith Cowan University (ECU) campus in the Perth CBD.

- Port Hedland Spoilbank Marina: Funding to construct a recreational boating marina in the Town of Port Hedland
- Transforming Bunbury's Waterfront Stage 3: Funding to construct a multi-use (recreational and commercial) boating facility in Bunbury in the South West region of Western Australia
- Renewable Hydrogen [fund]: Spending by the Western Australian Government to advance the renewable hydrogen industry in Western Australia
- Residential battery rebates - WA Residential Battery Scheme: Investment by the Western Australian Government in various programs designed to increase the uptake of Battery Energy Storage Systems in Western Australian households
- Critical Minerals Advanced Processing (CMAP) - Common-User Facility: Construction of a multi-user critical minerals pilot plant and testing facility to support the critical minerals industry.

Each of these projects is likely to have its own business case, underpinning quantitative and qualitative economic analysis, and associated long term economic benefits for the State. However given the breadth of the projects and multi-faceted nature of the impacts, ACIL Allen has instead focussed on the **direct and tangible benefits and impacts of the expenditure on the Western Australian economy**. To do this ACIL Allen has classified each of the projects into one of 10 ANZSIC codes, and distributed the expenditure across these. The profile of this activity is provided below (**Figure 3.8**).

Figure 3.8 Project Benefits: Direct Investment and Expenditure, $bn by year



Source: ACIL Allen

Training Sector Investment: $1.9 billion

The Training Sector Investment category refers to a number of specific tertiary education and training initiatives funded by the Western Australian Government across general VET and specific occupations or skills groups. This includes co-funding of some programs with the Commonwealth Government.

Methodology

The Training Sector Investment category groups 11 individual program level investments made by the Western Australian Government spanning fee-free and low-fee TAFE courses (see Case Study 1), specific programs targeting particular skill sets or occupations, and apprenticeship and traineeship subsidies and other supports.

These investments are designed to increase the skills and expertise of Western Australians to work in particular occupations or industries, improving the productivity of business and Government and in turn the Western Australian economy.

Case Study 1 Fee-free and low-fee TAFE courses

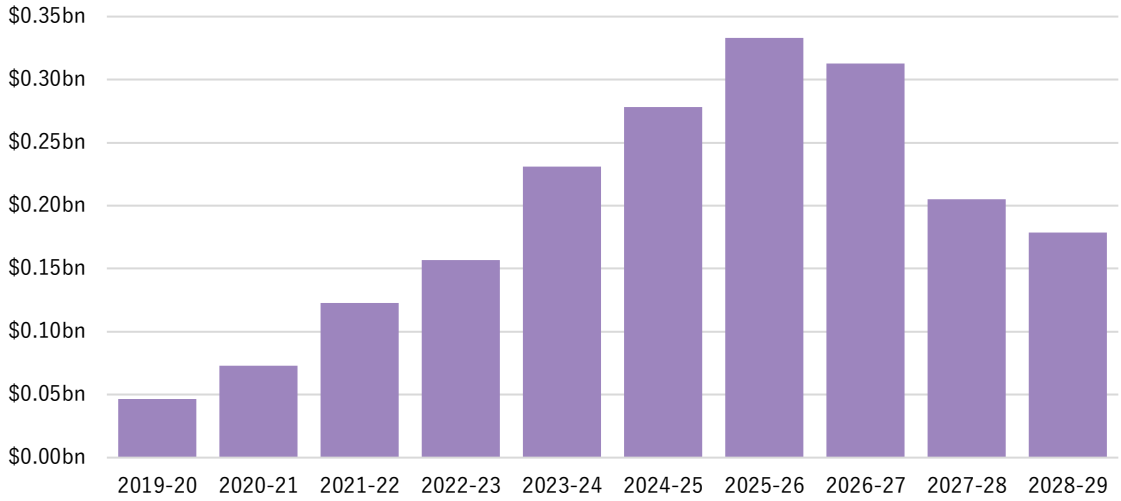
Since 2019-20, Western Australians have had access to fee-free and low-fee TAFE courses, many of which specifically target the needs of priority industries such as advanced manufacturing, building and construction, clean energy, and essential care services. These initiatives help ensure the State has a skilled workforce capable of supporting ongoing economic success. Over time, the program has expanded to offer 140 TAFE courses fee-free, with fees significantly reduced for a further 160 courses.[11]

The spending on training initiatives is input into ACIL Allen's CGE model as a defined shock to the human capital account within the model, diffusing the impact on the overall labour market as opposed to seeking to shock a particular labour resource pool, industry or occupational category. This means ACIL Allen does not need to specify a rate of return or benefit from the investment.

The profile of this activity is provided below (**Figure 3.9**).

[11] WA Government (2025). *Free TAFE campaign helps school leaver applications soar* [accessed on 12 November 2025]

Figure 3.9 Project Benefits: Direct Investment and Expenditure, $bn by year



Source: ACIL Allen

Balanced Scenario Training Sector Investments

In the Balanced Scenario, the CGE modelling parameters are set to distribute the benefits of the training sector investment over a larger share of the Western Australian workforce. This means a larger proportion of the State's workforce is assessed as having marginally higher levels of labour productivity, which in turn provides economic benefits.

Payroll Tax Reform: $0.5 billion

The Payroll Tax Reform category refers to the permanent uplift in the payroll tax exemption threshold in Western Australia, funded following the additional fiscal capacity provided by the HFE reforms. This is effectively a transfer of activity from the public sector to the private sector, although there are longer term macroeconomic benefits in this.

Methodology

The Payroll Tax Reform category refers to the broad based reduction in payroll tax provided to private sector employers based on their Western Australian payrolls.

Payroll tax is payable when an employer's total Australian wages exceed a specified threshold, which was previously set at $850,000. Prior to the reforms, Western Australia had one of the highest payroll tax burdens in the nation, increasing the cost of hiring and potentially constraining job creation in the State.

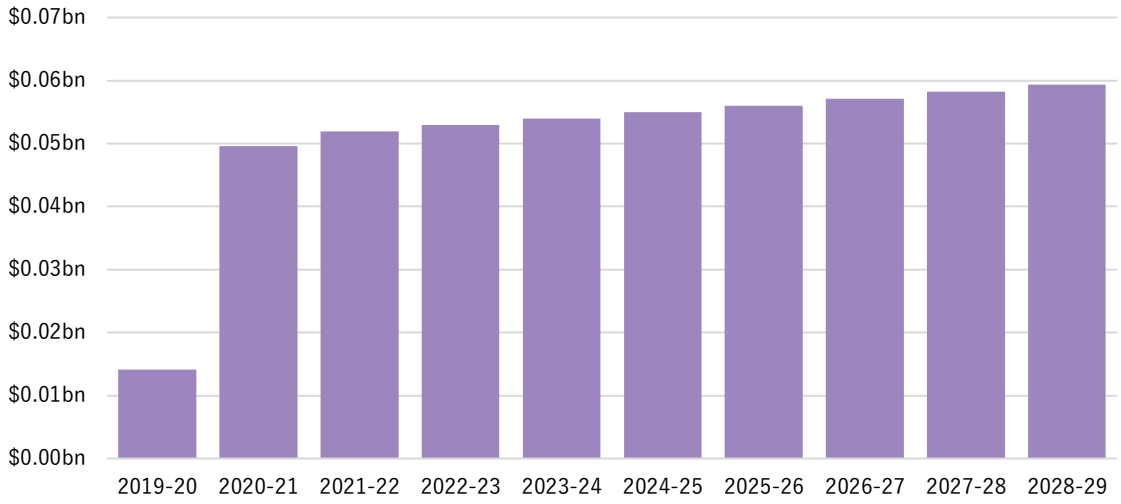
In 2019, the WA Government introduced payroll tax reforms to lift the tax-free threshold. The threshold was increased to $950,000 on 1 January 2020 and further raised to $1 million on 1 January 2021, bringing WA's payroll tax regime more in line with national standards.

Raising the payroll tax threshold has benefitted around 1,000 businesses in WA which are no longer liable for payroll tax, while an additional 11,000 businesses benefit from reduced payroll tax liabilities.[12] These reforms provide a meaningful boost to the local economy, particularly for small businesses, by supporting employment growth and enabling further investment in their operations.

The benefits of the payroll tax reforms introduced by the Western Australian Government are modelled using ACIL Allen's CGE model and the payroll tax module within this. This effectively acts as a transfer to consumption given the incidence of payroll tax falls on households / providers of labour. The benefit of the payroll tax reduction is distributed across the full scope of the payroll tax base included in the CGE model as a simplifying assumption noting the impact would be expected to be broadly consistent regardless of the assumed distribution by business type.

The profile of this activity is provided below (**Figure 3.10**).

Figure 3.10 Project Benefits: Payroll Tax Reform, $bn by year



Source: ACIL Allen

Energy Sector Investment: $4.4 billion

The Energy Sector Investment category refers to a small number of very large investments in electricity generation and transmission projects by the Western Australian Government via its Government Trading Enterprises Synergy and Western Power.

[12] Government of Western Australia. 2019. *McGowan Government delivers payroll tax relief for WA businesses*. Accessed online at https://www.wa.gov.au/government/media-statements/

Methodology

The Energy Sector Investment category refers to four major capital investments in the South West Interconnected System (SWIS), Western Australia's electricity network and associated electricity market in the south west parts of the State. These investments include:

- The Clean Energy Link Program, a two-pronged transmission investment with projects:
  - extending the SWIS further north at its current terminus to integrate more renewable energy supply and future sources of demand into the SWIS, and
  - expanding the SWIS' capacity in and around the Collie region to firm up the network and connect to new renewable energy supply.
- Stage 1 of the Collie Battery Energy Storage System, a 500MW / 2000MWh energy storage system located in Collie (see Case Study 3)
- Stage 2 of the Kwinana Battery Energy Storage System, a 225MW / 900MWh energy storage system located in Kwinana
- The King Rocks Wind Farm project, a 105MW wind farm located in the Shire of Kondinin which is 350km east of Perth

These projects were put forward by the DTF for consideration as the additional financial capacity from the HFE reforms has allowed the State to deliver these investments as a means to advance its economic development and decarbonisation objectives.

Case Study 2 Collie Battery Energy Storage System 1

The Collie Battery Energy Storage System is located in Collie – a town that has historically been at the centre of the South West Interconnected System through its coal-fired power station.


Source: Synergy

WA's electricity grid is currently undergoing a major transformation, with growing renewable energy penetration and displacement of fossil fuels. While this brings significant decarbonisation benefits, renewable energy can be intermittent, creating challenges for grid reliability and stability.

The Collie Battery Energy Storage System forms a key part of the WA Government's strategy to address these challenges. By storing excess renewable energy and discharging it during peak demand periods, it helps balance the energy system and support reliable electricity. The battery installation is also expected to support the economic transition of Collie itself, helping the town move from a traditionally coal-dependent economy toward new opportunities in the renewable energy sector.

Measuring the benefits of these projects is typically driven by a specialist energy market model. However, the time available to complete this study and the comprehensive nature of the various shocks means ACIL Allen has taken an alternative approach, building a simplified economic model of the projects and backsolving for a baseline level of economic return the projects would be required to achieve for the State to generate a return based on its cost of capital.

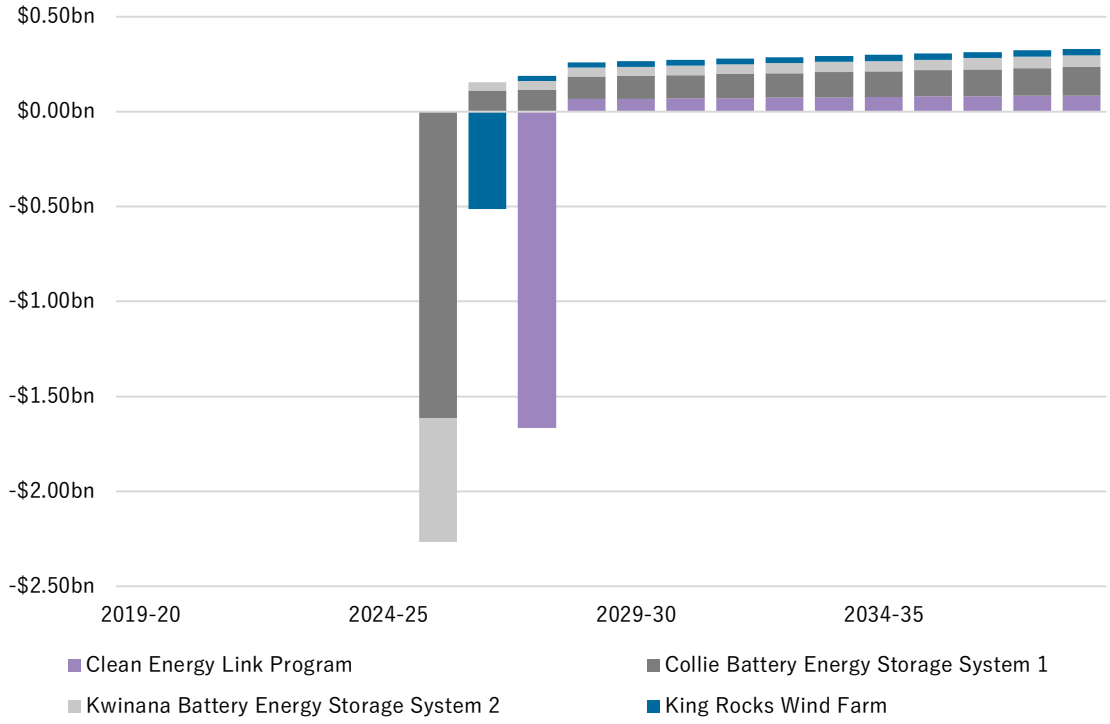
To do this, ACIL Allen sets out individual project benefit calculation curves by profiling the cash outlays required to deliver the projects into the final year of the project's construction. ACIL Allen then assumes each project has an economic life in keeping with the typical economic life for these assets (ie transmission = 50

years, generation = 30 years, energy storage = 20 years), with this assumption setting the period by which the project must deliver an economic return.

The final step is to derive an annual value for the projects' individual benefit (in real 2025 dollars), solved to a level which delivers a Net Present Value of the project of $0 at the State Government's opportunity cost of capital. This value is currently 5.6% on a nominal pre-tax basis. This is a conservative assumption and reflects the Department's absolute minimum economic return on investment required to sanction a project, all else being equal. It is considered likely the benefits of the projects individually would be higher, in particular the Clean Energy Link Program investment given its role in interconnecting new generation sources to the SWIS.

The profile of this activity is provided below (**Figure 3.11**).

Figure 3.11 Project Benefits: Energy Sector Investment, $bn by year



Source: ACIL Allen

There are also benefits associated with the construction and commissioning of the projects, which are allocated to the relevant industry codes within ACIL Allen's CGE model and incorporate the substantial leakages associated with equipment imports (i.e. BESS being a predominately imported finished infrastructure solution).

Balanced Scenario Energy Sector Investments

In the Balanced Scenario, the benefits calculations are based on the realisation of a private sector WACC, rather than the Western Australian Government's WACC. This WACC is 8.07%, rather than 5.6%. The 8.07% is sourced from a New York University global cost of capital database, which can be found here. The value is the Australian WACC for the industrial / metals / utilities sector.

Industry-centred Transport and Infrastructure Projects: $0.6 billion

The Industry-centred Transport and Infrastructure Projects category incorporates a broad range of investments in smaller-scale and / or targeted infrastructure where the State Government is seeking to foster direct economic or productivity benefits within the Western Australian economy. There are 14 projects in total in this category, the vast majority being transport projects.

Methodology

The Industry-centred Transport and Infrastructure Projects category refers to 14 capital investments made by the Western Australian Government, principally in the road, rail and ports sectors. These investments are explicitly targeted at securing major projects, improving the economics of existing projects, or improving productivity or achieving other outcomes (such as reducing carbon emissions or improving road safety) which are important to Government.

These projects span the full length and width of the State, and include investments such as:

- Improvements to the freight rail network servicing the State's grains industry: $178.0 million
- Investment in a clinker import circuit at the Port of Fremantle's Kwinana Bulk Terminal: $94.6 million
- Investment in capacity at the Port of Dampier to facilitate general cargo trade: $75 million, plus $40 million[13]
- An upgrade to the road network supporting the Mount Holland lithium mine: $60 million

In total the Department has identified some $586.9 million of these smaller scale but critically important economic development infrastructure projects funded following the HFE reforms. These all have a direct investment / expenditure impact on the Western Australian economy.

However, these projects are also clearly targeted at achieving economic growth and productivity benefits. To estimate these, ACIL Allen has developed an approach which allows for determination of the sector or sectors which receive the productivity dividends from these projects, and the estimated annual value of these benefits, over an assumed economic life.

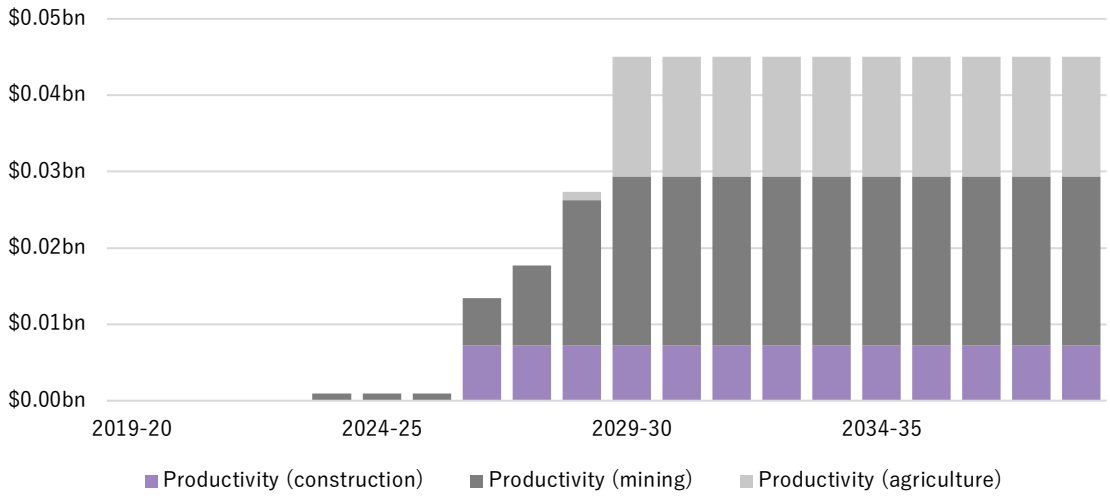
To do this, ACIL Allen makes a conservative assumption that these projects individually deliver economic benefits which would provide a Benefit Cost Ratio (BCR) of 1.5 over 30 years, using the State's opportunity cost of capital (5.6% nominal pre-tax). The benefits begin to accrue in the year after the project's construction and commissioning stages are complete.

[13] This project was ultimately funded by Commonwealth Government funding which was attached to a broader program of investment in Pilbara ports capacity, which was itself delivered by the State. The State would have invested in both of these projects in lieu of the Commonwealth funding. The funding flows are accounted for in ACIL Allen's CGE modelling inputs and the financial modelling presented in the previous section.

Each project is then assigned to a sector within ACIL Allen's CGE model, reflecting the sector which is most benefitting or expected to benefit from the investments made by the Western Australian Government. The benefits are input into the CGE model as effective productivity shocks which then manifest as gains to either production or income, taxes and profits depending on the sector.

The profile of this activity is provided below (**Figure 3.12**).

Figure 3.12 Project Benefits: Industry-centred Transport and Infrastructure Projects, $bn by year



Source: ACIL Allen

Balanced Scenario Transport and Infrastructure Projects

In the Balanced Scenario, the benefit calculations are set to target a BCR of 3.0, rather than a BCR of 1.5. The target BCR of 3.0 reflects ACIL Allen's expert judgement of a median infrastructure project with pervasive or relatively strong benefits, which is the characteristic of many of the projects which have been funded by the Western Australian Government in this benefits channel. For example, investments in the Western Australian agricultural freight network are expected to deliver pervasive economic benefits to the State by making it possible to bring the State's continued record-setting levels of wheat and other grain production to market in a timely manner.

Major Project Investment: $4.3 billion

The Major Project Investment category incorporates the economic benefits of four major economic development investments funded and facilitated by the Western Australian Government following the increase in fiscal capacity flowing from the HFE

reforms. These major investments reflect the State taking a direct position on major project facilitation for these opportunities.

Methodology

The Major Projects Investment category incorporates economic development associated with four major projects in Western Australia:

- The Perdaman Urea Project, and associated common user infrastructure investments made by the State including:
  - The Dampier Bulk Handling Facility, a dry bulk materials handling and storage shed investment at the Port of Dampier to facilitate export of Perdaman's dry bulk fertiliser
  - The Burrup Seawater Supply Scheme, an upgrade of the seawater desalination plant, intake and outfall infrastructure by the Water Corporation
  - Relocation and upgrade of the Hearson Cove Road within the Burrup Strategic Industrial Area.
- The Lumsden Point General Cargo Facility at the Port of Port Hedland (see Case Study 4).
- The Perth Film Studio Project, a State-funded, private sector delivered investment in a film studio and associated capacity to host a range of screen productions in Western Australia
- The Alkimos Seawater Desalination Plant, a 50GL desalination plant designed to reduce Western Australia's reliance on groundwater abstraction for potable water in the south west of the State

ACIL Allen has been fortunate to be involved in economic impact and / or Cost Benefit Analysis (CBA) for the first three of these projects. This means we have previously developed fully scoped and detailed economic shocks for each of these projects, and are using these to estimate the economic benefits of the investments funded by the State. This is because in all cases, the Western Australian Government's decision to invest in the project was the catalyst for the overall project to come to fruition.

The detailed shocks are confidential. ACIL Allen has provided a summary of the individual project level shocks in **Figure 3.13**.

For the Alkimos Seawater Desalination Plant, ACIL Allen worked with DTF to better understand the underlying rationale for the investment decision and the link to the additional fiscal capacity created by the HFE reforms. It is understood the Western Australian Government took a decision to make use of the additional fiscal capacity to in part pre-emptively invest in the project ahead of forecast potable water supply challenges, commencing in 2027 when groundwater abstraction allocations are being reduced by 27%[14]

[14] Water Corporation. 2025. *Project Information: Alkimos Seawater Desalination Plant*. Accessed online at http://www.watercorporation.com.au/

Case Study 3 Lumsden Point General Cargo Facility and Logistics Hub

The Port of Port Hedland is the largest bulk commodity export facility in the world. While the port is primarily designed to serve the needs of the iron ore export industry, demand for other trade has increased markedly in recent years.

The existing berths cannot efficiently or effectively manage the growth in demand for general cargo trade. This pressure is being driven by a new wave of major projects, including the extraction of critical battery minerals like copper and lithium.

At the same time, the region – which hosts the State's key economic sectors – is transitioning to renewable energy to support decarbonisation efforts. These needs underpin the business case for the Lumsden Point General Cargo Facilities and associated landside logistics facilities.

To support the business case submission, ACIL Allen was engaged by Pilbara Ports Authority to undertake an economic and social impact assessment of the Lumsden Point development. Our analysis shows that Lumsden Point is projected to become a significant driver of growth for the WA and national economies, with lifetime output impacts totalling $70.1 billion. This equates to $2.1 billion per annum, or a 0.1% boost to national GDP. Most of these benefits (93%) will be retained in WA, as the Pilbara region will be the epicentre of this growth, with the development opening up general cargo trade to the region.

Lumsden Point will also provide an ongoing boost to the economic welfare of Australians, with real income gains estimated at $81.6 billion over the project's lifetime. Unlike real output impacts, which are largely concentrated in WA, these real income gains are distributed more broadly across the Australian economy. This reflects both the sources of capital for the development and the significant taxation revenue generated by the uplift in economic activity, which flows throughout the nation.

Impact of real output

Impact of real income

ACIL Allen has modelled the economic benefit of the decision to pre-emptively invest in the project by applying the Water Corporation's standard full cost recovery approach to tariff-setting, and modelling the difference in effective water tariffs under two scenarios:

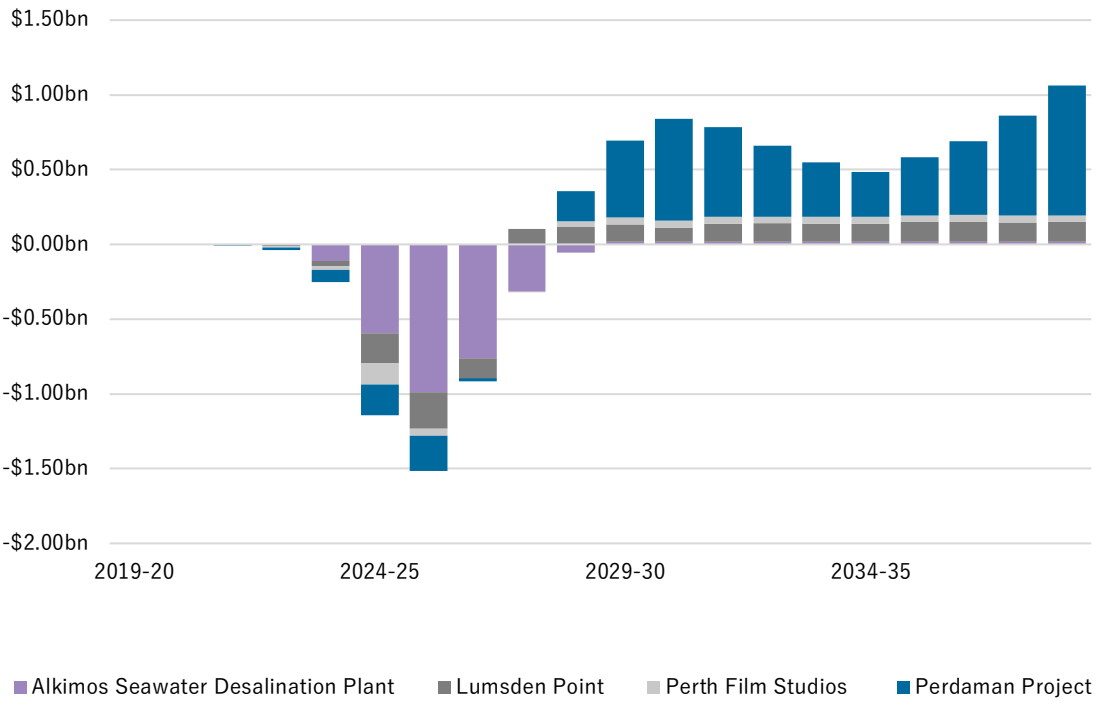
— Project is delivered as per the current schedule

— Project is deferred by five years, commencing construction in 2030-31 (thereby also removing it from the financial flows associated with the pre-reform case)

By investing in the project now, rather than five years, Water Corporation avoids additional construction cost escalation (which is running 3-5% above general inflation, based on recent work completed by ACIL Allen). This in turn avoids the impact of the real cost escalation on water tariffs, which in turn allows Water Corporation to operate the infrastructure with a lesser cost recovery impact on industry and households. This is monetised as the benefit of the decision to pre-emptively invest in the project.

The profile of this activity is provided below (**Figure 3.13**).

Figure 3.13 Project Benefits: Major Project Investment, $bn by year (negatives reflect State investment for presentation purposes only)



Source: ACIL Allen

Balanced Scenario Alkimos Seawater Desalination Plant

In the Balanced Scenario, the benefit calculation is derived based on an assumed future construction cost escalation rate of 5%, rather than 3%. This reflects higher end rates of construction cost escalation ACIL Allen observes in its work involving major project business cases.

4 Economic Impact Assessment

This section of the report presents the results and implications of ACIL Allen's economic impact assessment of the expenditure and investments delivered by the Western Australian Government as a result of the Commonwealth Government's HFE reforms.

4.1 Overview

ACIL Allen has integrated the financial and public policy analysis presented in Section 3 into its in-house Computable General Equilibrium (CGE) model *Tasman Global* to provide a perspective of the medium term macroeconomic impacts and consequences of the Commonwealth Government's GST distribution reforms. CGE modelling is a commonly-used analytical framework where there are reforms and investments with observable macroeconomic impacts.

The parameterisation of *Tasman Global* is based on the financial flows and associated benefits quantification presented in Section 3. Broader inputs and assumptions with respect to *Tasman Global* are presented in Appendix A.2 (baseline economic parameter assumptions) and Appendix A.1 (details of *Tasman Global)*.

Some additional parameters and assumptions are required to translate the project expenditures and impacts into the CGE modelling framework. These are described below.

Additional modelling parameters and assumptions

ACIL Allen makes the following macroeconomic assumptions as they relate to the impact of the reforms and associated expenditure and investments by the Western Australian Government. We have sought to explain these using plain English to aid in reader understanding of the assumptions and their implications.

- **Change in borrowings and interest payments:** ACIL Allen assumes the net public borrowings associated with the scenario and associated net interest payments are accounted for as foreign income flows. The implicit assumption in this is that the marginal issuance of new Commonwealth Government Securities in the impact analysis occurs with foreign investors, and all interest expenses incurred are in turn paid to foreign investors. This creates an additional net foreign income inflow to fund the initial expenditures in the scenario, which is commensurately repaid with interest as a foreign income outflow.
- **Flexible migration and labour markets:** ACIL Allen has enabled flexible migration and flexible labour market parameters within *Tasman Global* to model this scenario. This means the change in labour demand in one region (Western Australia) is able to be met in part by either tapping the existing slack in the Western Australian labour market (set by the assumed unemployment rate, labour force participation rate, and working age population growth rate assumptions in the Appendices), and then by migration (set by changes in relative real wages between Western Australia and the Rest of Australia) before crowding out effects begin. This is a more appropriate approximation of the real world outcomes associated with the scenario. It is important to note however there is assumed to be limited slack in the Western Australian and Rest of Australian labour markets within the modelling parameters.
- **No imputed change in production:** ACIL Allen has not included any imputed changes to production other than those specified in Section 3. This means changes in output reflect the net domestic gross value added ascribed to the expenditure and investments enabled by the 2018 Reforms, and the market-determined output benefits spurred on by changes in the productivity of the Australian economy (and associated changes to relative prices, the terms of trade, and exchange rate).

Presentation of results

The results of the economic impact assessment are presented in terms of three macroeconomic aggregates:

— **Real Output**: Gross Regional Product, Gross State Product and Gross Domestic Product - the total value of production. Gross product is a measure of the output generated by an economy over a period of time (typically a year). It represents the total dollar value of all finalised goods and services produced and is considered as a measure of the size of the economy. At a national level, it is referred to as Gross Domestic Product (GDP); at the State level, Gross State Product (GSP); and at a regional level, Gross Regional Product (GRP).

— **Real Income**: the total "return" of the project across the economy, including profits, wages and taxes. A measure of the welfare of residents in an economy through their ability to purchase goods and services and to accumulate wealth. Although changes in real economic output are useful measures for estimating how much the output of the economy may change due to a change in policy, changes in real income are also important as they provide an indication of the change in economic welfare of the residents of a region through their ability to purchase goods and services. Real income measures the income available for final consumption and saving after adjusting for inflation. An increase in real income means that there has been a rise in the capacity for consumption as well as a rise in the ability to accumulate wealth in the form of financial and other assets. The change in real income from a development is a measure of the change in the economic welfare of residents within an economy.

— **Employment**: total employment on a direct and indirect basis, in FTE terms. Real employment is measured in job years. A job year is employment of one full time equivalent (FTE) person for one year. Alternatively it can be expressed as one 0.5 FTE person for two years.

Alongside this, ACIL Allen has included a specific quantification of the **Commonwealth and State taxation impacts** as a subset of the macroeconomic impacts which emerge from the modelling. This is due to the significant public financial impacts and flows associated with the reforms, and interest in measuring the extent to which the macroeconomic impacts of decisions taken by the Western Australian Government flowing from the Commonwealth Government's HFE reforms have had a positive impact on overall tax revenue – thereby being partially funded through the macroeconomic benefits of the reforms.

Three defined channels of impact are presented in the results. These are:

— **Direct Project Expenditure and Investment (DE&I):** these impacts are the short and medium term economic impacts of the additional program and project investment undertaken by the Western Australian Government over the period where the reforms have been modelled, being 2019-20 to 2028-29.

— **Capital Deepening and Productivity Benefits (CD&PB):** these impacts are the medium term economic impacts of the additional capital – physical and human capital – investments undertaken by the Western Australian Government, which impact on labour and capital productivity in the Western Australian economy.

— **Major Project Investment (MPE):** these impacts centre on the major private sector project benefits attributed to the enabling investments funded by the Western Australian Government, and the associated macroeconomic impacts of these projects on the Western Australian and national economies.

ACIL Allen's results are presented in this way to demonstrate the impacts of the investments enabled by the Commonwealth Government's HFE reforms, and how these change depending on whether the different lenses to the investment are considered. For example, the results will show the DE&I channel provides the majority of the positive economic impact in the short term, reflecting the direct impact of adding additional expenditure and investment to the Western Australian economy. However, over time, the CD&PB stream becomes the dominant driver of the economic impact owing to the flow on impacts of the initial round of expenditure.

Results Scenarios

As described in the overview section, there are two CGE modelling scenarios contemplated in this assessment. These are:

— The **Conservative Scenario**, which presents a conservative view of the long term economic and productivity gains associated with investments made by the Western Australian Government. In the Conservative Scenario the parameters used to define the ongoing value of the projects and investments are set at the lower end of real world expectations, and would be expected to be sufficient for the Western Australian Government to have taken a decision to fund these projects.

— The **Balanced Scenario**, which presents a less conservative, but still pragmatic and realistic, view of the long term economic and productivity gains associated with the projects.

There are no changes to the projects themselves or the quantum invested by the Western Australian Government in each scenario. It is therefore reasonable to assume the difference between the two scenarios presents a realistic range of the outcomes which have been achieved and realised as a result of the investments funded by the reform dividend.

The results are described in the remainder of this section.

4.2 Economic Impact Results

The results of ACIL Allen's Economic Impact Assessment across the two scenarios are presented below.

Real Output

Overall, ACIL Allen's Economic Impact Assessment estimates the expenditure and investments enabled in Western Australia by the 2018 HFE reforms have delivered and will deliver between an additional $51.7 billion and $67.8 billion to Australia's Gross Domestic Product (GDP) between 2018-19 and 2038-39, or $2.5 billion to $3.4 billion per annum.

Across both cases, the impact on Real Output reflects the net effects of the fiscal transfer from the Commonwealth Government to the Western Australian Government, and its associated investment in economic infrastructure and programs designed to generate additional economic activity in Western Australia. The benefits centre on how the net change in Government borrowings (incorporating the higher level of Commonwealth borrowings and lower level of State borrowings in the policy case), translate into productivity enhancements in the Western Australian economy that permit higher levels of production, population growth (through migration), and labour utilisation across the Australian economy.

This is demonstrated through the proportionate contribution of the benefits to Real Output. In the Conservative Scenario, the first 10 years of the modelling period the DE&I channel generates $9.8 billion of the benefit to GDP, or 57% of the total impact. In the second 10 years of the modelling period, it is the CD&PB channel driving the benefit, with a $16.3 billion positive impact (47% of the total impact).

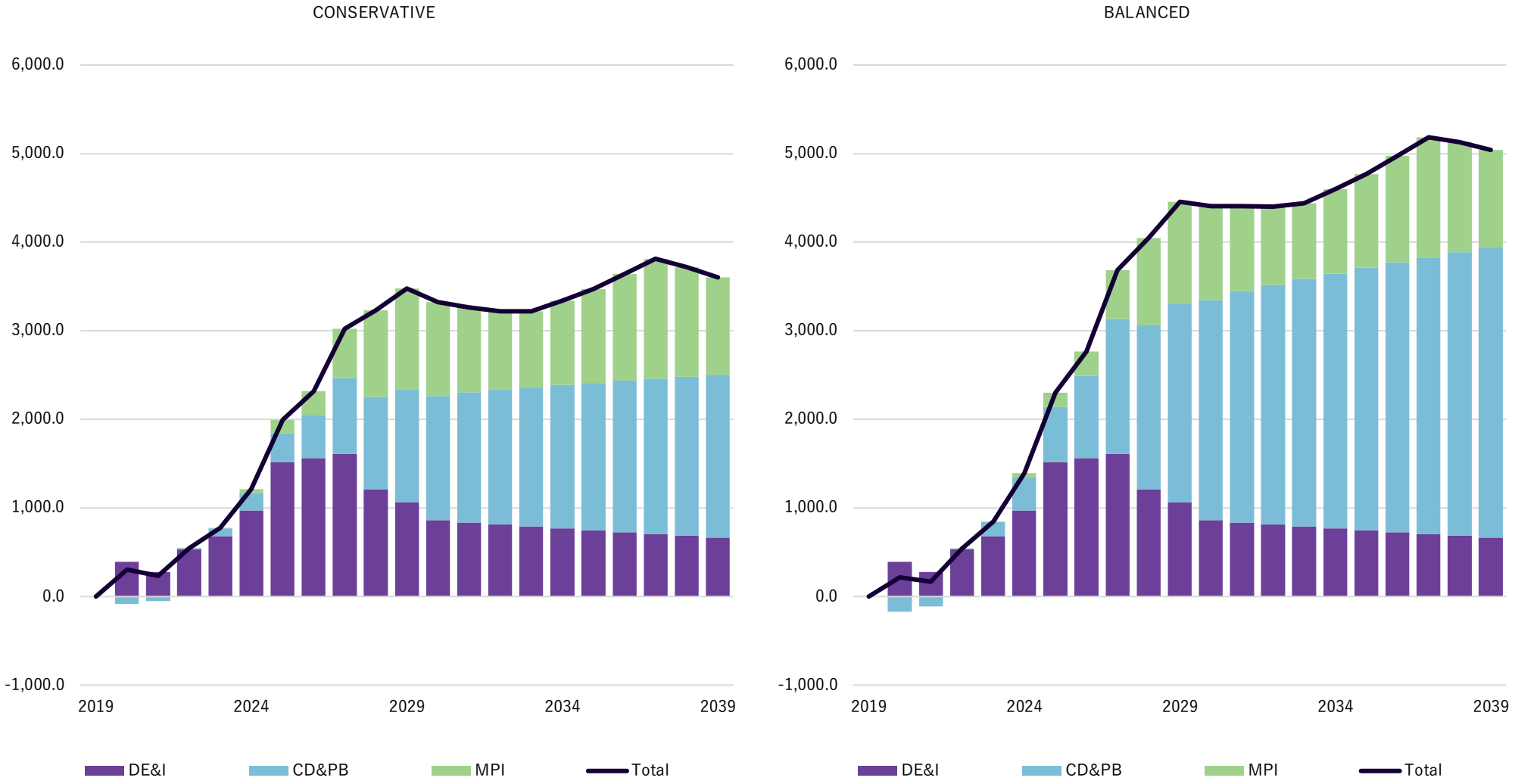
In the Balanced Scenario, the same profile of output benefits occurs in the initial wave of investment delivered by the Western Australian Government, however now also shows a larger ongoing productivity benefit flowing from the funded projects.

ACIL Allen's modelling suggests the ongoing capital deepening and productivity benefits flowing from the Western Australian Government's investments total $36.5 billion over 20 years, accounting for 54% of the benefit. The contribution is particularly strong in the second decade of the modelling, with 61% of the total benefit flowing from the CD&PB stream.

Importantly, the CD&PB benefit stream shows continuous growth in its returns over the projection period, suggesting the benefits of the investments would be expected to grow larger over time / if the modelling period was extended beyond 2038-39.

The profile of the Real Output benefits in both the Conservative and Balanced Scenario are presented below (**Figure 4.1**).

Figure 4.1 Economic Impact of 2018 HFE reforms, Real Output, by Jurisdiction and Impact Channel, $m real 2026 dollars



Source: ACIL Allen. Note: DE&I = Direct Expenditure and Investment; CD&PB = Capital Deepening and Productivity Benefits; MPI = Major Project Investment.

Real Income

Real income impacts refer to the net change in the economic welfare of a region or economy measured in terms of available wages and profits to resources in the economy, presented in the region where they are initially attributed. In this case, the real income benefits are shown to flow through the Western Australian economy, prior to partial redistribution to the rest of the economy through taxation payments.

Overall, ACIL Allen's Economic Impact Assessment estimates the expenditure and investments enabled in Western Australia by the 2018 HFE reforms have delivered and will deliver between an additional $38.5 billion to $52.7 billion in real incomes in Australia between 2018-19 and 2038-39, or $1.9 billion to $2.6 billion per annum.

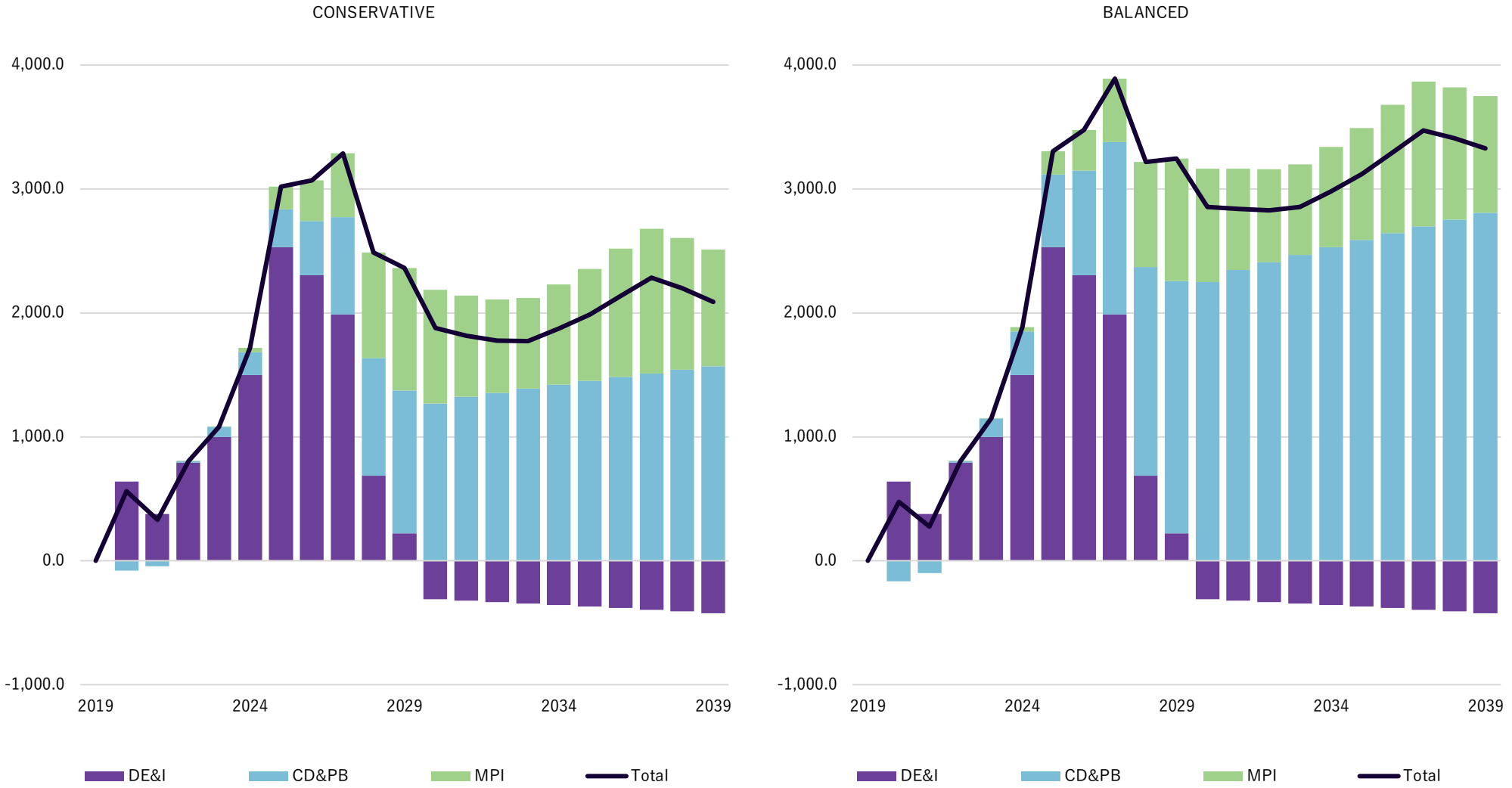
As with the Real Output impact, the DE&I channel provides the majority of the benefit in the short term across both scenarios due to the impact of the expenditure and investment which is funded from foreign debt inflows. However, this channel shifts negative from 2030-31 onwards on account of the net foreign outflows which result from the need to begin to repay the additional net debt and interest expenses in the scenario. However, the real income effects begin to flow in the CD&PB channel, as well as through the MPI channel as major investment projects enter production, result in an overall net increase in welfare.

The modelling suggests real incomes across Australia are around $70 per person per annum higher as a result of the reforms on average across the modelling period.

In the Balanced Scenario, the productivity enhancing impacts of the CD&PB come to the fore more strongly, delivering a positive impact of $32.3 billion of real income benefits over the modelling period (compared to $18.1 billion in the Conservative Scenario). Almost all of the real income benefit in the Balanced Scenario ($25.5 billion, 79% of the total CD&PB impact) flows in the second ten years of the modelling period, demonstrating the lasting benefits of the investments.

The profile of the Real Income benefits for both the Conservative and Balanced Scenario are presented below (**Figure 4.2**).

Figure 4.2 Economic Impact of 2018 HFE reforms, Real Income, by Jurisdiction and Impact Channel, $m real 2026 dollars



Source: ACIL Allen. Note: DE&I = Direct Expenditure and Investment; CD&PB = Capital Deepening and Productivity Benefits; MPI = Major Project Investment.

Employment

Overall, ACIL Allen's Economic Impact Assessment estimates the expenditure and investments enabled in Western Australia by the 2018 HFE reforms have delivered and will deliver an additional 1,629 to 1,846 FTE jobs on average throughout the modelling period, with a long term labour market benefit[15] of 1,200 to 1,600 FTE.

Across both scenarios, the positive employment impacts reflect the combination of higher expenditure during the first ten years of the modelling period, where employment benefits largely reflect the additional construction and project investment activity delivered by the Western Australian Government. At the peak, in the Conservative Scenario, ACIL Allen's modelling suggests the investment supported around 3,200 additional FTE jobs (in 2024-25), out of a total employment gain in this year of 3,985.

In the medium term, the net change in employment largely reflects the amalgamation of migration changes fostered by the change in real wages in Western Australian, and the increase in productivity in the Western Australian economy flowing from the downstream impact of the reforms. The income effects of higher labour productivity in the Western Australian economy also permit higher levels of employment. The confluence of these two factors results in the long term jobs benefit of around 1,200 FTE across the Australian economy.

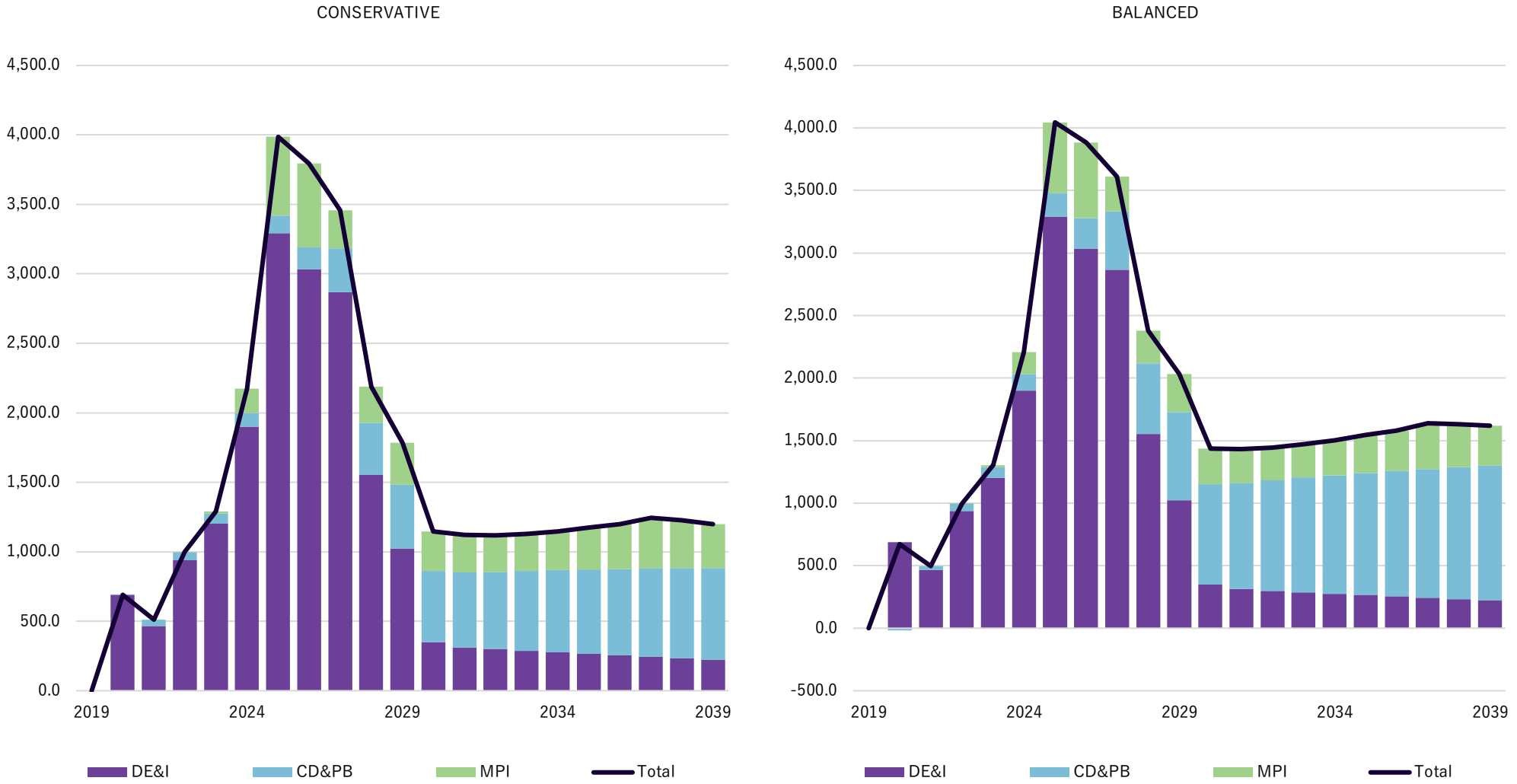
There is a relatively modest change in the peak employment (4,044 in the Balanced Scenario vs 3,985 in the Conservative Scenario), average employment (1,846 vs 1,629), and long run employment (1,617 vs 1,200) outputs across the two scenarios. This reflects the diminishing returns associated with new economic activity during a period of tight labour markets – meaning every additional dollar of investment in the economy provides fewer and fewer tangible employment outcomes.

However this also illustrates the importance of productivity-enhancing investments, as the gains in employment are over time driven mostly by this stream of impact. The modelling suggests the long run employment benefit in the Balanced Scenario from CD&PB is ~1,077 FTE jobs, compared to 660 FTE jobs in the Conservative Scenario.

The results of the two scenarios are presented on the following page (**Figure 4.3**).

[15] Defined as the deviation in total FTE job years in 2039.

Figure 4.3 Economic Impact of 2018 HFE reforms, Employment, by Jurisdiction and Impact Channel, FTE job years



Source: ACIL Allen. Note: DE&I = Direct Expenditure and Investment; CD&PB = Capital Deepening and Productivity Benefits; MPI = Major Project Investment.

Taxation

Overall, ACIL Allen's Economic Impact Assessment estimates the expenditure and investments enabled in Western Australia by the 2018 HFE reforms have delivered and will deliver between $14.0 billion and $17.1 billion of real taxation payments to the Western Australian and Australian Governments between 2019-20 and 2038-39, or $702 million to $853 million per annum.

Critically, across both scenarios, the vast majority of these taxation flows are attributable to Commonwealth Government taxation, reflecting the realisation of the benefits of higher employment, incomes and profits as a result of productivity benefits in Western Australia.

In the Conservative Scenario, ACIL Allen's CGE modelling suggests the reforms will deliver $13.3 billion of benefits to the Commonwealth, split across income taxes ($10.6 billion) and other Commonwealth taxes ($2.7 billion) over the modelling period. In the Balanced Scenario, the modelling suggests the reforms will deliver $16.2 billion of benefits to the Commonwealth, split across income taxes ($12.8 billion) and other Commonwealth taxes ($3.4 billion).

In the Conservative Scenario, the CD&PB and MPI impact channels become the dominant drivers of overall taxation revenue benefits, on account of them being the principal medium term benefits flowing from the expenditure and investments. Across the full scope of the modelling period, the taxation benefits to the Commonwealth Government are broadly balanced, at $4.2 billion for DE&I, $4.0 billion for CD&PB, and $5.1 billion for MPI.

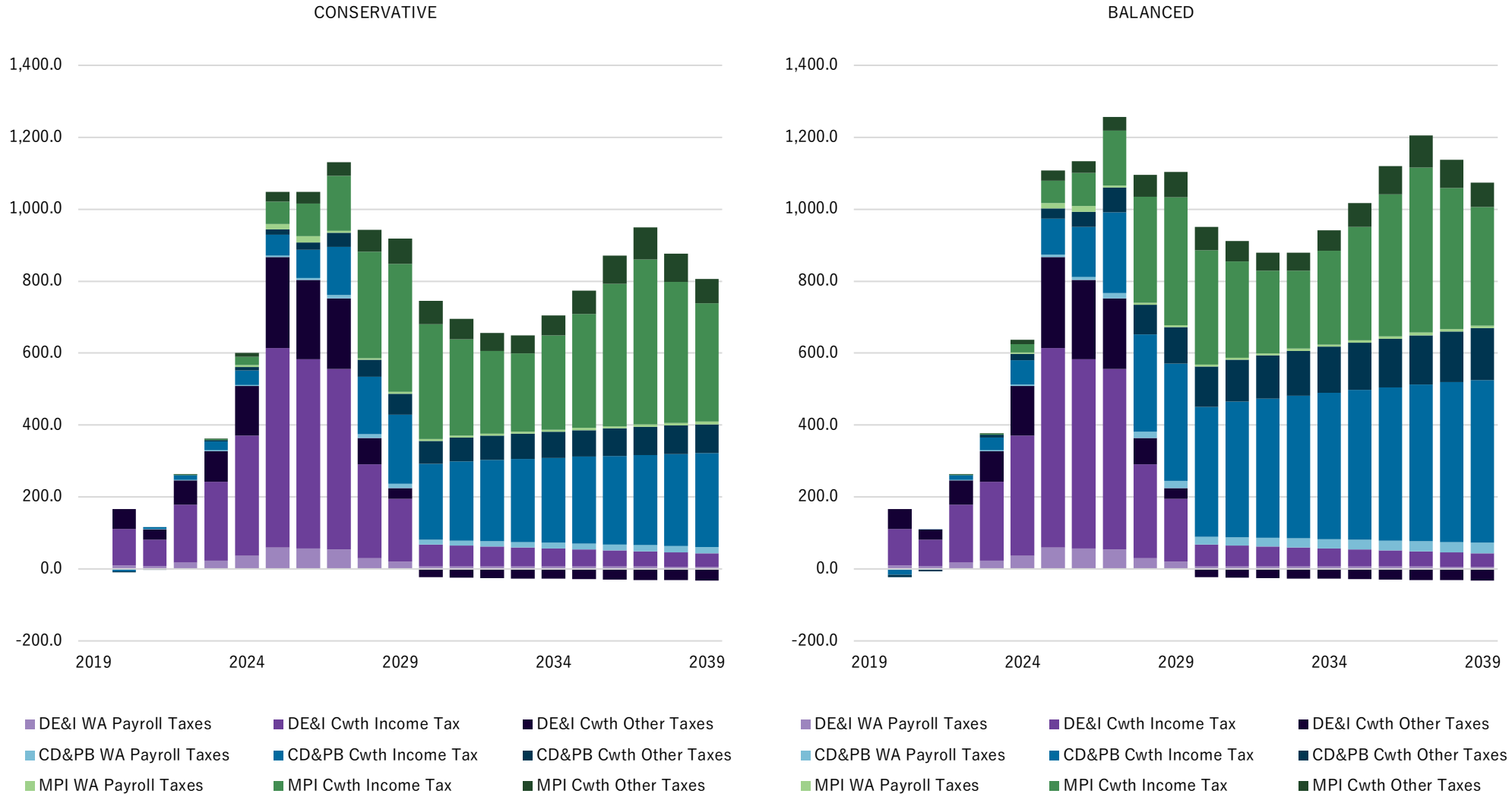
The Western Australian Government's payroll tax revenue is projected to be $709 million higher over the modelling period as a result of the reforms, on account of higher productivity and real wages.

In the Balanced Scenario, the CD&PB impact stream is the largest contributor to the overall taxation revenue benefits, due to the larger impact this stream has in the Balanced Scenario. The modelling suggests a total of $6.9 billion of Commonwealth tax benefits across the modelling period, compared to $4.2 billion for DE&I and $5.1 billion for MPI.

The Western Australian Government's payroll tax revenue is projected to be $838 million higher over the modelling period as a result of the reforms in the Balanced Scenario, on account of higher productivity and real wages.

ACIL Allen's tax benefits outputs from the CGE modelling are presented below (**Figure 4.4**).

Figure 4.4 Economic Impact of 2018 HFE reforms, Modelled Taxation Impacts, by Jurisdiction and Revenue Stream, $m real 2026 dollars



Source: ACIL Allen. Note: DE&I = Direct Expenditure and Investment; CD&PB = Capital Deepening and Productivity Benefits; MPI = Major Project Investment.

Summary Table

A summary of the Economic Impact Assessment results is provided in the table below.

Overall, the Economic Impact Assessment demonstrates that the Western Australian Government's decisions with respect to expenditure and investment flowing from the fiscal capacity afforded by the 2018 GST distribution reforms have and will continue to generate net positive economic outcomes for the Australian economy. This is due to the Western Australian Government's decisions to invest in a range of economic and other related infrastructure projects and economic development programs, which are unlikely to have been funded or supported without the additional fiscal capacity. A $2.5 to $3.2 billion boost to Australia's GDP each year provides an additional $701 million to $853 million in Commonwealth and State tax revenue, while supporting additional employment and delivery of a range of important economic development and public policy outcomes. These impacts would not have been possible without the 2018 GST distribution reforms.

Table 4.1 Economic Impact Assessment of 2018 HFE reforms, Summary Table

		Total		Average	
Real Output		Conservative	Balanced	Conservative	Balanced
Direct Expenditure & Investment	$m	17,423.9	17,423.9	871.2	871.2
Capital Deepening & Productivity Benefit	$m	20,466.4	36,520.6	1,023.3	1,826.0
Major Project Investment	$m	13,829.6	13,829.6	691.5	691.5
Total	$m	51,719.8	67,774.1	2,586.0	3,388.7

		Total		Average	
Real Income		Conservative	Balanced	Conservative	Balanced
Direct Expenditure & Investment	$m	8,383.2	8,383.2	419.2	419.2
Capital Deepening & Productivity Benefit	$m	18,095.1	32,280.9	904.8	1,614.0
Major Project Investment	$m	12,039.7	12,039.7	602.0	602.0
Total	$m	38,518.0	52,703.7	1,925.9	2,635.2

		Long run (2039)		Average	
Employment		Conservative	Balanced	Conservative	Balanced
Direct Expenditure & Investment	FTE	223.3	223.3	985.4	985.4
Capital Deepening & Productivity Benefit	FTE	660.4	1,077.2	383.2	600.0
Major Project Investment	FTE	316.9	316.9	260.8	260.8
Total	FTE	1,200.6	1,617.4	1,629.4	1,846.2

		Total		Average	
Taxes		Conservative	Balanced	Conservative	Balanced
Direct Expenditure & Investment	$m	4,647.6	4,647.6	232.4	232.4
Capital Deepening & Productivity Benefit	$m	4,202.5	7,223.2	210.1	361.2
Major Project Investment	$m	5,185.6	5,185.6	259.3	259.3
Total	$m	14,035.7	17,056.5	701.8	852.8

Source: ACIL Allen

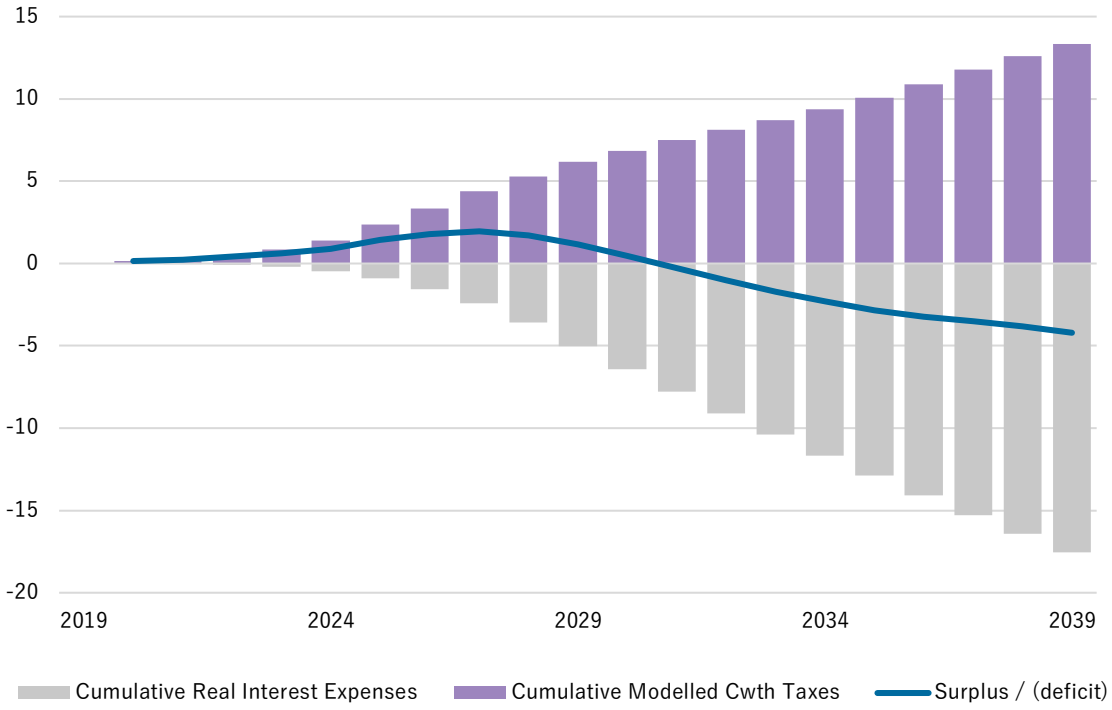
4.3 Commonwealth Tax Benefits vs Interest Expenses

ACIL Allen's Economic Impact Assessment identifies the net incremental Commonwealth income tax payments which have – prima facie – been generated to date and are expected to be generated on an ongoing basis as a result of the Western Australian Government's expenditure and investments. This is because the assessment is based on a counterfactual case where the HFE reforms did not happen, and these expenditures and investments did not occur. ACIL Allen's fiscal modelling, used to determine the net fiscal impacts of the reforms and associated financial impacts on the Western Australian and Commonwealth Governments, similarly identifies the attributable changes to revenue and expenditure associated with the HFE reforms.

Therefore, it is possible to compare the attributed Commonwealth taxation benefits to the estimated attributable changes to Commonwealth finances – particularly interest expenses, as the only material expenditure to date given the parameterisation of the Commonwealth's NWOG and GST Pool Top Up as being funded by additional Commonwealth borrowings.

The results of this analysis are provided below (**Figure 4.5**), using the Conservative Scenario. ACIL Allen estimates that as of the 2024-25 financial year, the HFE reforms have generated **$2,358 million of Commonwealth taxes, while interest expenses have increased by $914 million.** This means, all things being equal, the HFE reforms have to date generated an additional $1,444 million of net Commonwealth Government fiscal capacity.

Figure 4.5 Estimated Net Cwth Fiscal Impact, Expenditure Basis, $bn (real 2026), Conservative Scenario results, cumulative



Source: ACIL Allen

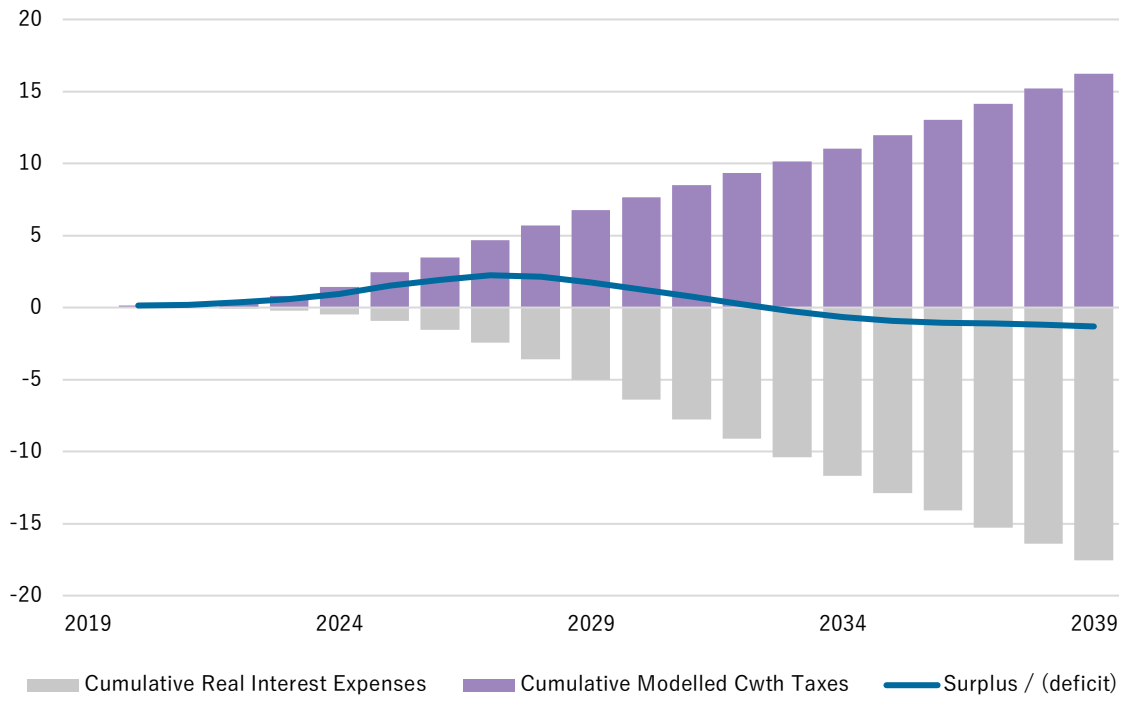
The positive impact diminishes over time, reflecting the cumulative impact of the higher Commonwealth debt burden relative to the size of the Commonwealth income tax stream. However, by 2038-39, ACIL Allen's modelling suggests the cumulative financial position of the Commonwealth (abstracting the direct balance

sheet impact of additional gross borrowings, focussing just on the expenditure impacts of interest payments) is a net change of -$4,207 million in real 2026 dollars – or less than 1/10th of the headline cost of the NWOG and Pool Top Up payments

The results are similar, albeit more positive, in the Balanced Scenario. ACIL Allen estimates that as of the 2024-25 financial year, the HFE reforms have generated **$2,440 million of Commonwealth taxes, while interest expenses have increased by $914 million.** This means, all things being equal, the HFE reforms have to date generated an additional $1,526 million of net Commonwealth Government fiscal capacity.

ACIL Allen's modelling suggests the cumulative financial position of the Commonwealth (abstracting the direct balance sheet impact of additional gross borrowings, focussing just on the expenditure impacts of interest payments) is a net change of -$1,314 million in real 2026 dollars – just 2.8% of the headline cost of the NWOG and Pool Top Up payments to the end of the 2030 financial year (**Figure 4.6**).

Figure 4.6 Estimated Net Cwth Fiscal Impact, Expenditure Basis, $bn (real 2026), Balanced Scenario, cumulative



Source: ACIL Allen

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Appendices

A Tasman Global

This appendix provides an overview of ACIL Allen's in-house computable general equilibrium (CGE) model, Tasman Global, which has been used to assess the economic impacts for the 2018 HFE reforms. It also outlines the key economic parameters that define the baseline scenario within the CGE model.

A.1 Model Overview

ACIL Allen's computable general equilibrium model *Tasman Global* is a powerful tool for undertaking economic impact analysis at the regional, state, national and global level.

There are various types of economic models and modelling techniques. Many of these are based on partial equilibrium analysis that usually considers a single market. However, in economic analysis, linkages between markets and how these linkages develop and change over time can be critical. *Tasman Global* has been developed to meet this need.

Tasman Global is a large-scale computable general equilibrium model which is designed to account for all sectors within an economy and all economies across the world. ACIL Allen uses this modelling platform to undertake industry, project, scenario and policy analyses. The model is able to analyse issues at the industry, global, national, State and regional levels and to determine the impacts of various economic changes on production, consumption and trade at the macroeconomic and industry levels.

Tasman Global is a model that estimates relationships between variables at different points in time. This is in contrast to comparative static models, which compare two equilibriums (one before a policy change and one following). A dynamic model such as *Tasman Global* is beneficial when analysing issues where both the timing of and the adjustment path that economies follow are relevant in the analysis.

The Database

A key advantage of *Tasman Global* is the level of detail in the database underpinning the model. The database we will use for this project is derived from the Global Trade Analysis Project (GTAP) database (version 8.1). This database is a fully documented, publicly available global data base which contains complete bilateral trade information, transport and protection linkages among regions for all GTAP commodities.

The GTAP model was constructed at the Centre for Global Trade Analysis at Purdue University in the United States. It is the most up-to-date, detailed database of its type in the world. *Tasman Global* builds on the GTAP model's equation structure and database by adding the following important features:

- dynamics (including detailed population and labour market dynamics)
- detailed technology representation within key industries (such as electricity generation and iron and steel production)
- disaggregation of a range of major commodities including iron ore, bauxite, alumina, primary aluminium, brown coal, black coal and LNG
- the ability to repatriate labour and capital income
- a detailed emissions accounting abatement framework
- explicit representation of the States and Territories of Australia
- the capacity to explicitly represent multiple regions within states and territories of Australia.

Nominally the *Tasman Global* database divides the world economy into 141 regions (133 international regions plus the 8 states and territories of Australia) although in reality the regions are frequently disaggregated further. ACIL Allen regularly models Australian projects or policies at the regional level.

The *Tasman Global* database also contains a wealth of sectoral detail currently identifying up to 70 industries. The foundation of this information is the input-output tables that underpin the database. The input-output tables account for the distribution of industry production to satisfy industry and final demands.

Industry demands, so-called intermediate usage, are the demands from each industry for inputs. For example, electricity is an input into the production of communications. In other words, the communications industry uses electricity as an intermediate input.

Final demands are those made by households, governments, investors and foreigners (export demand). These final demands, as the name suggests, represent the demand for finished goods and services. To continue the example, electricity is used by households – their consumption of electricity is a final demand.

Each sector in the economy is typically assumed to produce one commodity, although in *Tasman Global*, the electricity, transport and iron and steel sectors are modelled using a 'technology bundle' approach. With this approach, different known production methods are used to generate a homogeneous output for the 'technology bundle' industry. For example, electricity can be generated using brown coal, black coal, petroleum, base load gas, peak load gas, nuclear, hydro, geothermal, biomass, wind, solar or other renewable based technologies – each of which have their own cost structure.

The other key feature of the database is that the cost structure of each industry is also represented in detail. Each industry purchases intermediate inputs (from domestic and imported sources) primary factors (labour, capital, land and natural resources) as well as paying taxes or receiving subsidies.

Factors of Production

Capital, land, labour and natural resources are the four primary factors of production. The capital stock in each region (country or group of countries) accumulates through investment (less depreciation) in each period. Land is used only in agriculture industries and is fixed in each region. *Tasman Global* explicitly models natural resource inputs as a sector specific factor of production in resource based sectors (coal mining, oil and gas extraction, other mining, forestry and fishing).

Population Growth and Labour Supply

Population growth is an important determinant of economic growth through the supply of labour and the demand for final goods and services. Population growth for the 112 international regions and for the 8 states and territories of Australia represented in the *Tasman Global* database is projected using ACIL Allen's in-house demographic model. The demographic model projects how the population in each region grows and how age and gender composition changes over time and is an important tool for determining the changes in regional labour supply and total population over the projection period.

For each of the 120 regions in *Tasman Global*, the model projects the changes in age-specific birth, mortality and net migration rates by gender for 101 age cohorts (0-99 and 100+). The demographic model also projects changes in participation rates by gender by age for each region, and, when combined with the age and gender composition of the population, endogenously projects the future supply of labour in each region.

Changes in life expectancy are a function of income per person as well as assumed technical progress on lowering mortality rates for a given income (for example, reducing malaria-related mortality through better medicines, education, governance, etc.). Participation rates are a function of life expectancy as well as expected changes in higher education rates, fertility rates and changes in the workforce as a share of the total population.

Labour supply is derived from the combination of the projected regional population by age by gender and the projected regional participation rates by age by gender. Over the projection period labour supply in most developed economies is projected to grow slower than total population as a result of ageing population effects. For the Australian States and Territories, the projected aggregate labour supply from ACIL Allen's demographics module is used as the base level potential workforce for the detailed Australian labour market module, which is described in the next section.

The Australian Labour Market

Tasman Global has a detailed representation of the Australian labour market which has been designed to capture:

- different occupations
- changes to participation rates (or average hours worked) due to changes in real wages
- changes to unemployment rates due to changes in labour demand
- limited substitution between occupations by the firms demanding labour and by the individuals supplying labour
- limited labour mobility between states and regions within each state.

Tasman Global recognises 97 different occupations within Australia – although the exact number of occupations depends on the aggregation. The firms who hire labour are provided with some limited scope to change between these 97 labour types as the relative real wage between them changes. Similarly, the individuals supplying labour have a limited ability to change occupations in response to the changing relative real wage between occupations. Finally, as the real wage for a given occupation rises in one State relative to other states, workers are given some ability to respond by shifting their location. The model produces results at the 97 3-digit ANZSCO (Australian New Zealand Standard Classification of Occupations) level.

The labour market structure of *Tasman Global* is thus designed to capture the reality of labour markets in Australia, where supply and demand at the occupational level do adjust, but within limits. Labour supply in *Tasman Global* is presented as a three stage process:

- labour makes itself available to the workforce based on movements in the real wage and the unemployment rate;
- labour chooses between occupations in a State based on relative real wages within the state; and
- labour of a given occupation chooses in which State to locate based on movements in the relative real wage for that occupation between states.

By default, *Tasman Global*, like all CGE models, assumes that markets clear. Therefore, overall, supply and demand for different occupations will equate (as is the case in other markets in the model).

A.2 Baseline CGE Parameters

A CGE model is fundamentally a counterfactual, comparative tool that assess economic outcomes relative to what would have occurred in the absence of a given policy or shock. To do this, the model first established a baseline that describes how the economy is expected to evolve without the intervention being analysed.

ACIL Allen has calibrated the baseline CGE parameters calibrated using the latest available State Budget Papers, ensuring the analysis reflects a contemporary view of macroeconomic conditions across Australia. These parameters are presented in the table below.

Table A.1 CGE Parameters Overview

State	Parameter / Year									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Real GDP growth (Financial year ending 30 June)										
NSW	1.75%	1.75%	2.25%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
VIC	2.00%	2.50%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%
QLD	2.50%	2.75%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
SA	1.25%	1.75%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
WA	0.50%	2.50%	3.00%	2.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
TAS	0.00%	1.00%	2.25%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
NT	-2.60%	7.80%	5.90%	1.70%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
ACT	3.50%	3.25%	3.50%	3.75%	3.75%	2.00%	2.00%	2.00%	2.00%	2.00%
Employment growth (Financial year ending 30 June)										
NSW	1.63%	1.00%	1.25%	1.50%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%
VIC	2.50%	0.50%	1.50%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%
QLD	3.10%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
SA	1.40%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
WA	3.10%	1.75%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
TAS	-1.00%	2.00%	0.75%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%
NT	1.41%	0.80%	1.20%	1.60%	1.60%	1.60%	1.60%	1.60%	1.60%	1.60%
ACT	1.87%	1.75%	1.75%	2.00%	2.00%	1.74%	1.62%	1.61%	1.54%	1.52%
Unemployment rate (Financial year ending 30 June)										
NSW	4.00%	4.25%	4.25%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
VIC	4.50%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
QLD	4.00%	4.25%	4.50%	4.50%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
SA	4.10%	4.10%	4.30%	4.52%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
WA	3.75%	3.75%	4.00%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
TAS	4.00%	4.00%	4.00%	4.00%	4.00%	4.50%	4.50%	4.50%	4.50%	4.50%
NT	4.10%	5.00%	4.70%	4.60%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
ACT	3.40%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Population growth (Financial year ending 30 June)										
NSW	1.30%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%	1.10%

State	Parameter / Year									
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
VIC	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%
QLD	1.75%	1.50%	1.50%	1.25%	1.25%	1.50%	1.50%	1.50%	1.50%	1.50%
SA	1.06%	0.99%	0.98%	0.96%	0.95%	0.95%	0.95%	0.95%	0.95%	0.95%
WA	1.90%	1.80%	1.70%	1.70%	1.60%	1.60%	1.60%	1.60%	1.60%	1.60%
TAS	0.30%	0.50%	0.60%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
NT	0.70%	1.00%	1.10%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%
ACT	2.00%	1.75%	1.75%	1.75%	1.75%	1.53%	1.42%	1.41%	1.36%	1.33%
Iron Ore Industry (Financial year ending 30 June)										
WA iron ore production (mt)	886.00	885.00	885.00	893.00	893.00	893.00	893.00	893.00	893.00	893.00
Global iron ore price (US$/t)	101.4	77.6	72	72	72	72	72	72	72	72
Exchange Rate										
AUD/USD	0.6500	0.646	0.657	0.671	0.684	0.6562	0.6575	0.6587	0.6599	0.6612

Source: Various State Government budget papers

B About ACIL Allen

ACIL Allen is Australia's most trusted independent economics, public policy and strategy advisory firm. As a firm, we specialise in economic analysis, and in understanding how policy decisions can translate into socio-economic outcomes. ACIL Allen has significant resources upon which it can draw. We employ around 60 consultants located in Adelaide, Brisbane, Canberra, Melbourne, Perth, and Sydney.

The firm has built a reputation for quality research, credible analysis, and innovative advice on economic, policy and strategic matters over a period of more than twenty years. ACIL Allen operates across a select range of industries including energy, mineable resources, water and other infrastructure, education, tourism, health and human services policy and provides specialist advice to companies, governments, regulators and industry associations. ACIL Allen has been at the forefront of analysis of changes and policy issues in these sectors. We have helped governments to develop a number of policy mechanisms applied in response to these changes and policy issues. We have also helped many private corporations to develop responsive business strategies in this dynamic environment.

Our analytical and modelling skills enable us to provide robust quantitative estimates of the impacts of market and regulatory risk. We often use risk-based decision tools such as real options frameworks to advise clients on risk management strategies and opportunities. In part, our experience in these roles relates to major infrastructure assets, supporting feasibility assessments, equity raisings, sale and acquisition processes and funding of infrastructure assets, including natural gas and electricity transmission and distribution systems, power stations, roads, railways, airports and ports.

Our consultants are drawn from a wide variety of disciplines including economics, finance, statistics, geology, physics, environmental science, engineering and mathematics. We also offer a diverse range of professional backgrounds in State and Federal Government, academia and business.

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