

REPORT TO
THE ROYAL AUTOMOBILE CLUB OF WESTERN
AUSTRALIA

17 JUNE 2016

MOTORIST TAXATION REVENUE AND ROAD SPENDING



WESTERN AUSTRALIA

FINAL REPORT





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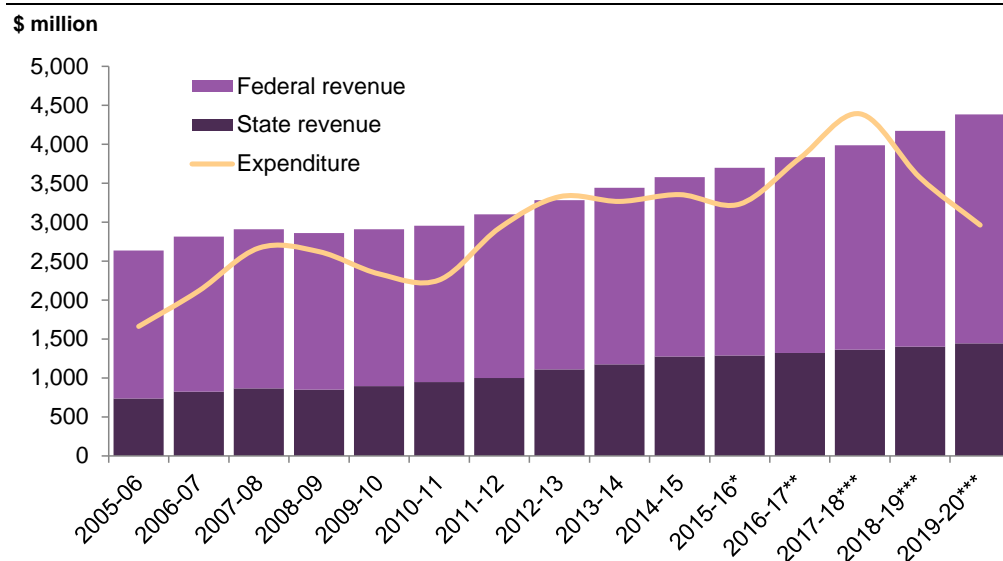
KEY FINDINGS

This report has been prepared by ACIL Allen Consulting (ACIL Allen) for the RAC WA (RAC). The report is an update of the 2015 report for RAC and includes the latest figures from the Western Australian (State) and Federal Government budgets. The report contains estimates of government revenues collected from motorists in Western Australia and spending by governments on Western Australian roads. Key findings based on the latest available budget estimates include the following:

- The State Government is expected to collect approximately \$1.3 billion in fees (licence and registration fees, recording fees and heavy vehicle permits) from Western Australian motorists in 2015-16.
- The Federal Government is expected to collect approximately \$2.4 billion from motor vehicle related taxes in Western Australia in 2015-16. This revenue is mainly generated by GST paid on motor vehicles and excise duty on fuel.
- Total spending on roads in Western Australia in 2015-16 is estimated to be around \$3.2 billion. This figure is lower than 2014-15, as a number of major projects near completion, however spending is expected to increase through the forward estimates. Spending on Western Australian roads now represents around 87 per cent of the revenues collected by the Federal and State Governments from Western Australian motorists (in 2005-06, the ratio was approximately 63 per cent).
- The State Government spends more on roads than it receives from motorists, but the Federal Government does not: approximately 48 cents in every dollar of expected revenue collected in 2015-16 by the Federal Government from Western Australian motorists will be returned to the State for spending on roads.

An overview of the balance between government spending and revenue is provided in **Figure ES 1**.

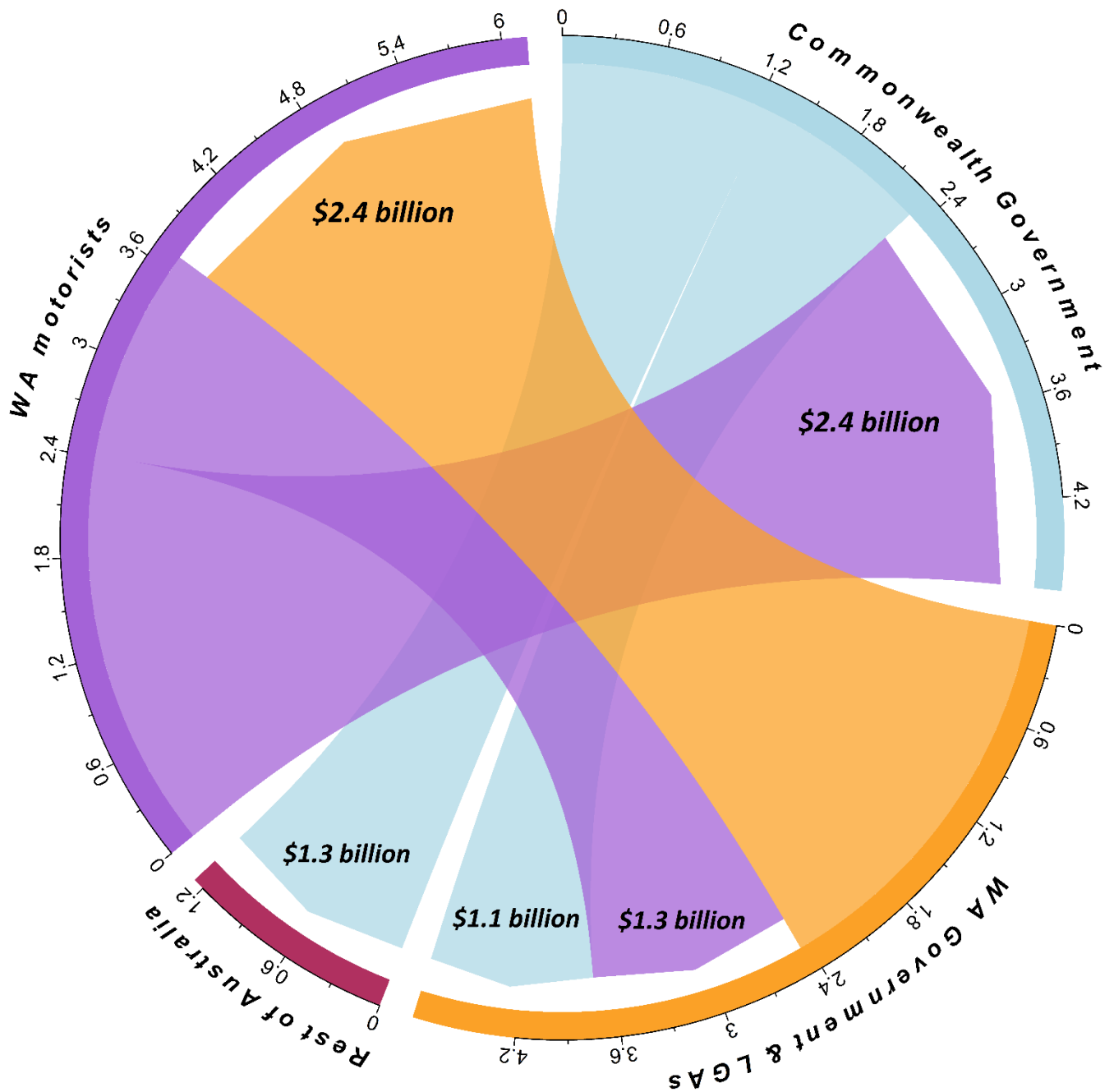
FIGURE ES 1 VEHICLE-RELATED GOVERNMENT REVENUE AND ROAD EXPENDITURE, HISTORIC AND PROJECTED



* ESTIMATED; ** BUDGET ESTIMATE; *** FORWARD ESTIMATE
 Source: ACIL Allen analysis

The relationships between collection and spending of vehicle related revenue at the different levels of government are depicted in **Figure ES 2**, and discussed in detail in Chapter 4. Note that the Figure only includes revenue directly raised from Western Australian motorists and therefore excludes State Revenue, Council rates and general transfers from the Federal to the State Government.

FIGURE ES 2 VEHICLE RELATED GOVERNMENT REVENUE AND ROAD EXPENDITURE, 2015-16 (\$ MILLION, ROUNDED)



Source: ACIL Allen analysis



This report is the latest in a series of reports prepared by ACIL Allen for RAC to identify fees and taxes paid by motorists in Western Australia and the expenditure on roads and activities directly related to road networks in Western Australia. The report contains analyses of data from the 2016-17 Federal and State Government Budgets.

The remainder of the report is structured as follows:

- Chapter 2 contains estimates of government revenue generated by road-related activities in Western Australia. Specifically, the chapter contains calculations of the amount of revenue collected in fuel taxes, vehicle registration fees and other government charges associated with vehicle acquisition, operation and ownership in Western Australia.
- Chapter 3 contains estimates of total government expenditure on road infrastructure in Western Australia.
- Chapter 4 contains key conclusions and the identification of relationships between State Government and Federal Government revenue and expenditure as it pertains to Western Australia.



Motorists pay a range of fees and taxes associated with their vehicle. Vehicle ownership related fees and duties are mostly collected by the State Government whereas taxes generated by the usage of vehicles are collected by the Federal Government. This chapter contains ACIL Allen's estimates of the total motor vehicle related government revenue generated from Western Australian motorists.

2.1 State Government revenue

In 2015-16, the State Government is expected to collect \$1.3 billion in total car related revenue. The State Government collects various fees associated with motor vehicles, including:

- vehicle licence duties: collected by the State Government when a vehicle is licenced or a vehicle licence is transferred;
- motor vehicle registrations: collected by the State Government for the ongoing registration of motor vehicles, and
- other fees: collected by the State Government and includes taxes from oversized motor vehicles and motor vehicle recording fees.

Table 2.1 depicts historic and projected vehicle related revenue collected by the State Government in Western Australia for the 2005-06 to 2019-20 period. The Table shows that in 2015-16, \$1,287 million of vehicle related revenue is expected to be collected, an increase of 0.9 per cent from the previous year.

Motor vehicle registrations are expected to make up the largest share (68.3 per cent) of total revenue in 2015-16, and is expected to increase through the forward estimates to 70 per cent by 2019-20. Revenue growth from vehicle licence duty is forecast to contract as a result of a forecast decline in new car sales, and then experience modest growth through the remainder of the forward estimates in line with population growth.

Future revenues are expected to increase but at a far slower rate with revenues reaching almost \$1.4 billion in 2017-18, and then averaging annual growth of 2.9 per cent per annum over the forward estimates to 2019-20. Over the same period of time, total tax revenue for all taxes raised by the State Government is forecast to increase by 2.7 per cent per year and total \$10.1 billion by 2019-20.

TABLE 2.1 – VEHICLE RELATED STATE GOVERNMENT REVENUE, HISTORIC AND PROJECTED

Financial year	Vehicle licence duty	Motor vehicle registrations	Other	Total	Annual growth
	(\$ million)	(\$ million)	(\$ million)	(\$ million)	(%)
2005-06	342	361	33	736	
2006-07	393	396	36	825	12.1%
2007-08	393	434	39	866	5.0%
2008-09	318	486	44	848	-2.1%
2009-10	332	516	48	896	5.7%
2010-11	338	557	51	946	5.6%
2011-12	357	589	52	998	5.5%
2012-13	404	650	56	1,110	11.2%
2013-14	385	728	60	1,173	5.7%
2014-15	363	848	65	1,276	8.8%
2015-16*	346	879	62	1,287	0.9%
2016-17**	350	907	64	1,321	2.6%
2017-18***	355	944	64	1,363	3.2%
2018-19***	361	976	64	1,401	2.8%
2019-20***	368	1,010	65	1,443	3.0%

* Estimated; ** Budget Estimate; *** Forward Estimate.

Note: Budget estimates may have varied from those of previous years.

Source: Department of Treasury and Finance Western Australia: Budget Paper No. 3 (2007-08 to 2016-17).

2.2 Federal Government revenue

The Federal Government collects motor vehicle related revenue in a range of ways including:

- GST: raised from motor vehicle related transactions such as the purchase of motor vehicles and fuel
- luxury car tax: paid on the purchase of new cars for which the value exceeds the Government's luxury threshold¹
- excise duty petrol and diesel: taxes paid on the purchase of petrol and diesel, and
- passenger motor vehicle customs: customs duties that are paid on imported vehicles on entry into Australia.

Estimating the amount of Federal Government revenue associated with motor vehicles in Western Australia involves some degree of uncertainty as the Federal Budget does not report on the shares of tax revenues generated by each state and territory. The methodology used by ACIL Allen to estimate Federal Government revenue is detailed in Appendix A.

The total motor vehicle related revenue by category collected by the Federal Government is depicted in Table 2.2, are ACIL Allen's estimates of Federal Government revenue that is collected from Western Australian motorists. In 2015-16, the Federal Government estimated it will raise \$25.7 billion

¹ Current thresholds are \$75,375 for fuel efficient vehicles and \$63,184 for other vehicles. See, <https://www.ato.gov.au/Rates/Luxury-car-tax-rate-and-thresholds/>, accessed 18 May 2016.

in vehicle related revenue including \$2.4 billion in Western Australia. The Western Australian share is equivalent to 9.4 per cent of total vehicle related revenue raised.

Forecasts of Federal Government revenues are expected to increase over the forward estimates to 2019-20. The majority (37 per cent) of this increase in revenue is expected to come from an increase in the revenue raised from excise duties on diesel. Revenue raised from the excise duty on petrol is also expected to increase, contributing on average 23 per cent to the projected increase in Federal Government revenues. Together the revenue raised from the excise duties on petrol and diesel are expected to contribute an additional \$3.5 billion in Federal Government vehicle related revenue or on average 61 per cent of the projected increase in Federal Government vehicle related revenue over the forward estimates.

TABLE 2.2 – FEDERAL VEHICLE RELATED REVENUE GENERATED IN AUSTRALIA AND WA, HISTORIC AND PROJECTED

Financial year	Petrol associated GST	New vehicle associated GST	Fleet related GST	Luxury car tax	Excise duty petrol	Excise duty diesel	Passenger MV customs	Total
Federal revenue generated (\$ million)								
2005-06	1,515	2,294	1,686	320	7,280	6,240	1,258	20,593
2006-07	1,663	2,517	1,850	340	7,310	6,420	1,300	21,399
2007-08	1,751	2,651	1,949	464	6,959	6,674	1,400	21,848
2008-09	1,886	2,855	2,099	384	6,461	6,687	1,135	21,507
2009-10	1,812	2,742	2,016	499	6,339	6,886	1,226	21,520
2010-11	2,008	3,039	2,234	540	5,910	7,080	600	21,410
2011-12	1,949	2,950	2,169	435	6,036	8,231	805	22,575
2012-13	2,037	3,083	2,266	430	6000	8600	920	23,335
2013-14	2,184	3,306	2,430	464	6053	8940	921	24,299
2014-15	2,307	3,492	2,567	520	6,035	8,908	732	24,562
2015-16*	2,456	3,718	2,733	580	6,200	9,460	570	25,717
2016-17**	2,578	3,903	2,869	570	6,450	9,860	590	26,819
2017-18***	2,717	4,114	3,024	570	6,700	10,260	630	28,015
2018-19***	2,862	4,333	3,185	600	7,050	10,860	690	29,580
2019-20***	2,991	4,527	3,328	630	7,550	11,620	760	31,406
Generated in Western Australia (\$ million)								
2005-06	152	229	196	49	618	530	127	1,901
2006-07	166	251	215	53	621	545	138	1,990
2007-08	175	265	227	72	591	567	148	2,045
2008-09	189	285	244	59	549	568	117	2,011
2009-10	181	274	235	77	538	585	123	2,012
2010-11	201	303	260	83	502	601	59	2,009
2011-12	195	295	253	67	513	699	80	2,101
2012-13	204	308	264	66	509	730	92	2,173

Financial year	Petrol associated GST	New vehicle associated GST	Fleet related GST	Luxury car tax	Excise duty petrol	Excise duty diesel	Passenger MV customs	Total
2013-14	218	330	283	72	514	759	92	2,268
2014-15	231	349	299	80	512	756	73	2,301
2015-16*	246	371	318	90	526	803	57	2,411
2016-17**	258	390	334	88	548	837	59	2,513
2017-18***	272	411	352	88	569	871	63	2,626
2018-19***	286	433	371	93	599	922	69	2,772
2019-20***	299	452	387	97	641	987	76	2,940

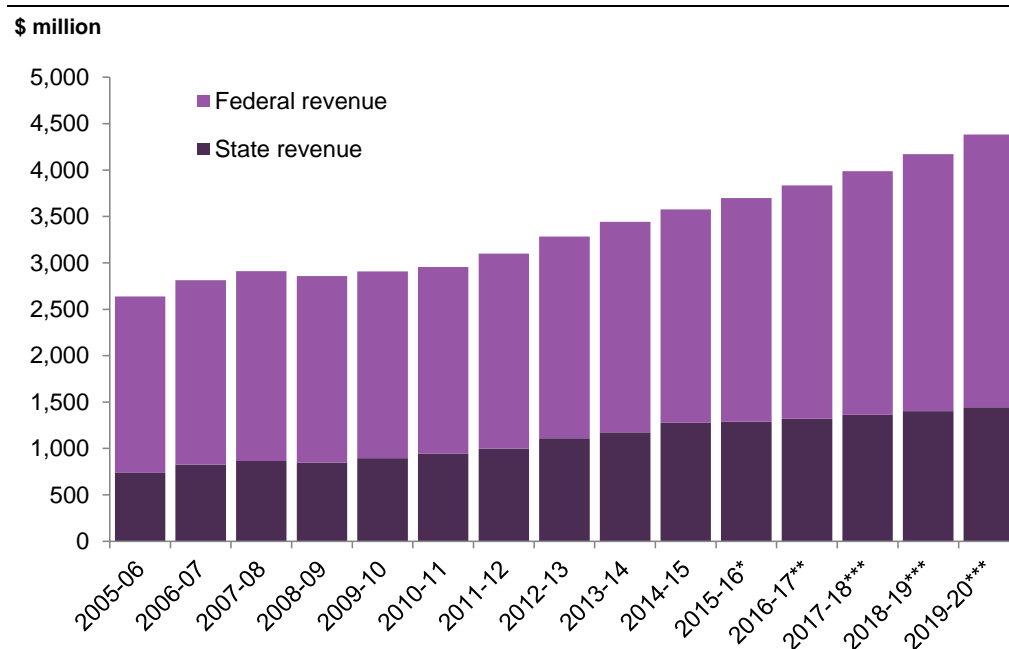
* Estimated; ** Budget Estimate; *** Forward Estimate. Note: Budget estimates may have varied from those of previous years.
Data source: ACIL Allen analysis of Australian Government Budgets 2006-07 to 2016-17.

2.3 Total revenue

Figure 2.1 depicts total Federal and State Government revenue collected from Western Australian motorists. It shows the share of State and Federal Government revenue over time and highlights the forecast increase in the share of Federal Government revenue.

Through the forward estimates, vehicle related revenue collected by the Federal Government is expected to grow on average by 5.1 per cent per year, while revenue collected by the State Government is expected to grow on average by 2.9 per cent over the same period of time.

FIGURE 2.1 VEHICLE RELATED GOVERNMENT REVENUE, HISTORIC AND PROJECTED



* ESTIMATED; ** BUDGET ESTIMATE; *** FORWARD ESTIMATE
SOURCE: ACIL ALLEN ANALYSIS



3

GOVERNMENT EXPENDITURE

While a large share of revenue is collected by the Federal Government, it is the State Government and Western Australian local governments who are responsible for the provision of motoring-related infrastructure and services in Western Australia. The Federal Government does not spend directly on Western Australian motoring infrastructure and services but does transfer its revenue to the Western Australian Government either as part of transfers for specific projects or as block grants to State Government consolidated revenue.

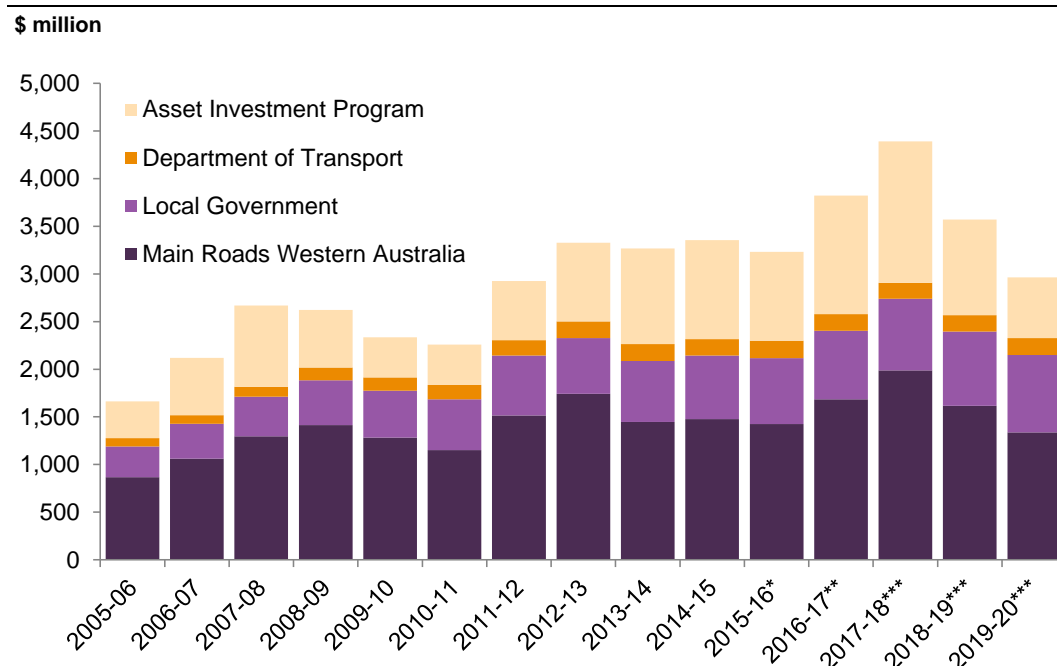
Total road-related expenditure in Western Australia by State Government agencies and by the combined local government agencies is depicted in **Figure 3.1**. At a State Government level, road-related spending is undertaken by Main Roads Western Australia and by the Department of Transport. The largest shares of expenditure are attributable to Main Roads Western Australia and the combined local governments. The share of expenditure attributable to the Department of Transport is relatively low.

Between the 2014-15 and the 2015-16 State budget, the funding structure of Main Roads' Asset Investment Program has changed substantially from one that is primarily funded by State capital appropriation and asset sales to one that is now largely funded by the Federal Government. The Program includes significant funds for a range of projects including Safer Roads and Bridges Program, NorthLink WA Swan Valley section, Mitchell Freeway Burns Road to Hester Avenue, and the North West Coastal Highway Minilya to Barradale. ACIL Allen has therefore treated this program as road-related expenditure and included it in the detailed analysis of this current report.

Over the past decade, expenditure by Main Roads Western Australia has made up the largest share of total motoring related expenditure (averaging 50 per cent), and the State Government's Asset Investment Program (the second biggest component of expenditure) made up 26 per cent.

It was growth in these two components that saw total expenditure grow on average by 7.8 per cent per annum over the past decade. Similarly, the forecast average of a 0.6 per cent per annum decline in total expenditure over the forward estimates to 2019-20 is driven by an average of a 26 per cent decline in expenditure from Main Roads Western Australia and the State Government's Asset Investment Program in 2018-19 and 2019-20.

A description of each of the organisations and programs that are responsible for spending on roads in Western Australia are presented in the following sections.

FIGURE 3.1 TOTAL SPENDING ON ROADS IN WESTERN AUSTRALIA BY AGENCY

NOTE: * ESTIMATED; ** BUDGET ESTIMATE; *** FORWARD ESTIMATE
SOURCE: ACIL ALLEN ANALYSIS

3.1 Main Roads Western Australia

Main Roads Western Australia is responsible for the provision and maintenance of Western Australia's highways and main roads, and also for the provision of road-related services. These services are described in the sections below.²

Road safety

The objective of this program, which is separate from the Road Safety Commission, is to reduce the road fatality rate, minimise road factors contributing to road trauma and reduce the serious crash injury rate. Works undertaken must have safety as the foremost factor and include the State and National Black Spot programs and various projects that improve safety on the existing road network.

Road system management

The objective of this program is to optimise real time management of the network, provide traveller information and support delivery of projects. Works include activities of the traffic operation centre, heavy vehicle operation activities, metropolitan and regional road asset management, road user and customer services, emergency telephones, street lighting, intelligent transport systems, traffic signals and road advisory services, such as traffic alerts, to the community.³

Road efficiency improvements

The objective of this program is to improve the efficiency, capacity and utilisation of the existing road network. Improvements include geometric improvements, bridge strengthening and intersection improvements including roundabouts and interchanges.

² The Office of Road Safety has been removed from Main Roads and is now a standalone agency. The Road Safety Commission was formed as of 1 July 2015. Expenditure by the previous Office of Road Safety and Road Safety Commission has not been captured in this report. The majority of expenditure undertaken by the Office of Road Safety is funded from traffic fine revenues. Traffic fines are designed to change behaviour, rather than to fund roads.

³ Main Roads Western Australia, Annual Reports (various editions), and website, <https://www.mainroads.wa.gov.au>.

Infrastructure for community access

The objective of this program is to provide infrastructure that will improve personal mobility and community access, including increasing the quality of access where appropriate, providing levels of access commensurate with community expectations and meeting minimal levels of appropriate access. Works include providing access to remote communities, pedestrian facilities, cyclist facilities, road user amenities, public transport integration and improvements such as new bridges to address flood closures.

Infrastructure for state development

The objective of this program is to expand the road network in accordance with government transport and land use strategies that will facilitate the economic and regional development of the State. These works are mostly aimed at increasing the capacity of the road network through the addition of new links.

Annual levels of expenditure by Main Roads Western Australia by service category are provided in Table 3.1. The majority of funds are spent on road network maintenance and road efficiency projects. Expenditure on road network maintenance is expected to increase over the forward estimates, peaking in 2019-20 at \$465 million. Expenditure on road efficiency projects is expected to peak in 2017-18 at \$843 million before declining for the remainder of the forward estimates.

TABLE 3.1 – MAIN ROADS WESTERN AUSTRALIA EXPENDITURE, HISTORIC AND PROJECTED

Financial year	Road safety	Road system management	Road efficiency	Infrastructure for community access	Road network maintenance	Infrastructure for State development	Total
\$ million							
2005-06	76	76	69	102	410	134	867
2006-07	68	79	157	135	410	213	1,062
2007-08	81	76	158	105	450	426	1,297
2008-09	141	80	202	97	475	418	1,413
2009-10	166	92	202	32	502	286	1,282
2010-11	102	86	225	41	582	115	1,150
2011-12	117	119	461	35	614	167	1,514
2012-13	114	108	428	56	750	286	1,742
2013-14	81	123	573	57	303	310	1,447
2014-15	158	114	689	34	268	214	1,477
2015-16*	194	164	574	19	345	129	1,426
2016-17**	180	159	526	5	343	471	1,683
2017-18***	108	136	843	9	395	499	1,989
2018-19***	91	146	688	9	427	255	1,616
2019-20***	107	166	517	10	465	73	1,337

* Estimated; ** Budget Estimate; *** Forward Estimate.

Note: Budget estimates may have varied from those of previous years.

Source: Government of Western Australia Budgets 2006-07 to 2016-17

3.2 Asset Investment Program: Western Australia

The Asset Investment Program of Main Roads Western Australia is designed to deliver road improvements which are aimed at increasing the efficiency of the existing road network as part of an integrated transport system. Expenditure on the State Government's Asset Investment Program is expected to exceed \$4.4 billion over the forward estimates.

In the 2016-17 State budget, the majority of funding for the Asset Investment Program came from capital appropriation, agency borrowings and internal funds and balances. These sources constitute State funds specifically raised for the purpose of funding roads from sources that are not related to motorist revenue. It is for this reason that the Asset Investment Program spending was not analysed in detail in previous reports. However, between the 2014-15 and the 2017-18, the State budget funding structure of the Asset Investment Program has changed, to become one that is now largely funded by the Federal Government. ACIL Allen has therefore treated this program as road-related expenditure and included it in the detailed analysis of this current report.

Table 3.2 shows the estimated expenditure for the Asset Investment Program from 2005-06 through to 2019-20 which highlights the rapid growth in funds allocated to the Program. The projects funded under the program include Perth Freight Link and NorthLink WA.

In the 2016-17 WA Government Budget there was a forecast decline in roads infrastructure in 2019-20. This was a result of the expiry (on 30 June 2019) of the current National Partnership Agreement on Land Transport Infrastructure Projects. The WA Government expects that when a new agreement is in place, investment into road infrastructure will stabilise.

TABLE 3.2 – ASSET INVESTMENT PROGRAM HISTORIC AND PROJECTED: WESTERN AUSTRALIA

Financial year	Expenditure	Annual growth
	\$ million	(%)
2005-06	384	-3.8%
2006-07	600	56.2%
2007-08	841	40.2%
2008-09	854	1.5%
2009-10	605	-29.2%
2010-11	422	-30.2%
2011-12	619	46.8%
2012-13	824	33.0%
2013-14	1,003	21.8%
2014-15	1,038	3.5%
2015-16*	933	-10.1%
2016-17**	1,245	33.4%
2017-18***	1,486	19.4%
2018-19***	1,003	-32.5%
2019-20***	636	-36.6%

* Estimated; ** Budget Estimate; *** Forward Estimate.

Data source: Government of Western Australia Budgets 2008-09 to 2016-17

3.3 WA Department of Transport

The Department of Transport has a number of roles associated with transport in general, but plays only a minor role in aspects of transport that are directly related to infrastructure delivery. One of the Department's main responsibilities is monitoring and enforcing the registration of motor vehicles and licensing of drivers. Such services are important for road safety and hence are considered to fall into the classification of road-related expenditure. Table 3.3 contains estimates of expenditure undertaken by the Department of Transport.

TABLE 3.3 – WA DEPARTMENT OF TRANSPORT EXPENDITURE, HISTORIC AND PROJECTED

Financial year	Expenditure \$ million	Annual growth (%)
2005-06	87	
2006-07	91	4.8%
2007-08	103	13.3%
2008-09	134	29.6%
2009-10	140	4.6%
2010-11	151	7.9%
2011-12	161	6.8%
2012-13	176	9.1%
2013-14	178	1.1%
2014-15	173	-2.8%
2015-16*	182	5.2%
2016-17**	174	-4.4%
2017-18***	167	-4.0%
2018-19***	172	3.0%
2019-20***	178	3.5%

* Estimated; ** Budget Estimate; *** Forward Estimate.

Data source: Government of Western Australia Budgets 2008-09 to 2016-17

3.4 Western Australian local governments

Local roads account for about 80 per cent of the total road network in Western Australia. Local government agencies spend a large share of their budgets on preserving, repairing, upgrading and constructing roads. Approximately 21 per cent of local government expenditure is funded by the State Government.⁴ This proportion of expenditure has been discounted from the figures reported below as it has already been included in the estimates of expenditure by Main Roads Western Australia. Local government expenditure is detailed in Table 3.4.

⁴ Western Australian Local Government Association, 2015, *Report on local government road assets and expenditure 2013/14*, p. 7.

TABLE 3.4 – LOCAL GOVERNMENT EXPENDITURE, HISTORIC AND PROJECTED

Financial year	Preservation of existing roads		Upgrades and construction		Flood damage		Total	
	\$ million	share of total	\$ million	share of total	\$ million	share of total	\$ million	Annual growth
2005-06	219	68%	103	32%	1		323	
2006-07	254	70%	111	30%			365	13%
2007-08	278	67%	136	33%			414	14%
2008-09	311	66%	159	34%			470	14%
2009-10	342	69%	150	31%			492	5%
2010-11	354	66%	160	30%	21	4%	534	9%
2011-12	445	71%	148	24%	37	6%	630	18%
2012-13	418	71%	167	29%			585	-7%
2013-14***	465	73%	174	27%			638	9%
2014-15***	479	72%	186	28%			665	4%
2015-16***	493	71%	199	29%			692	4%
2016-17***	507	70%	213	30%			720	4%
2017-18***	522	70%	228	30%			749	4%
2018-19***	537	69%	243	31%			780	4%
2019-20***	552	68%	260	32%			812	4%

*** ACIL Allen extrapolation.

Note: Flood damage related expenditure is included in preservation of roads after 2005-06, except where specific data could be found. Also due to rounding some percentages may not add to 100.

Source: Report on Local Government Road Assets & Expenditure 2010-11 to 2013-14

3.5 Major road projects

Recent government budgets both at a Federal and State level have a strong infrastructure focus. As a result of focussing on infrastructure investment, total planned expenditure on major road projects almost doubled between the 2012-13 and the current (2016-17) State budget from \$3.6 billion to \$7.4 billion. In 2012-13 there were only two projects with a construction value above \$200 million; Gateway WA and the upgrade of Great Northern Highway in Port Hedland. Now there are seven of which two have estimated construction costs in excess of \$500 million.

Most major road projects are expected to reach their construction peak in 2016-17 or 2017-18 which is why road expenditure is currently anticipated to drop off in 2018-19. The seven major projects detailed in the 2016-17 State Government Budget are:

- **Safer Roads and Bridges Program** - estimated total cost of \$408 million, of which \$30 is allocated to 2016-17 and \$104 million will occur from 2017-18 to 2019-20
- **Great Northern Highway- Muchea to Wubin Stage 2** - estimated total cost of \$387 million, of which \$93 million is allocated to 2016-17 and \$192 million is allocated from 2017-18 through to 2019-20
- **North Link WA- Swan Valley Section** - estimated total cost of \$837 million, of which \$193 million is allocated to 2016-17 and \$556 million will occur between 2017-18 and 2019-20
- **North Link WA- Tonkin Highway Grade Separations** - estimated total cost of \$281 million, of which \$153 million is allocated to 2016-17 and \$110 million in 2017-18

- **Mitchell Freeway – Burns Road to Hester Avenue** - estimated total cost of \$236 million, of which \$95 million is allocated to 2016-17 and \$27 million will occur in 2017-18
- **Perth Freight Link - Construct** - estimated total cost of \$1.8 billion, of which \$194 million is allocated to 2016-17 and \$1 billion will occur between 2017-18 and 2019-20
- **Reseal Capitalisation Program** - estimated total cost of \$462 million, of which \$62 million is allocated to 2016-17 and \$199 million will occur between 2017-18 and 2019-20.

The 2016-17 Federal Budget announced the completion of the Asset Recycling Initiative in 2016-17. This initiative provided funding of \$5 billion over five years in the form of financial incentives to jurisdictions that sell assets and reinvest the sale proceeds into new productive infrastructure. The program worked on a first come, first served basis. This initiative was applicable to all types of infrastructure, and upon the completion of the program the State Government had not used the initiative.

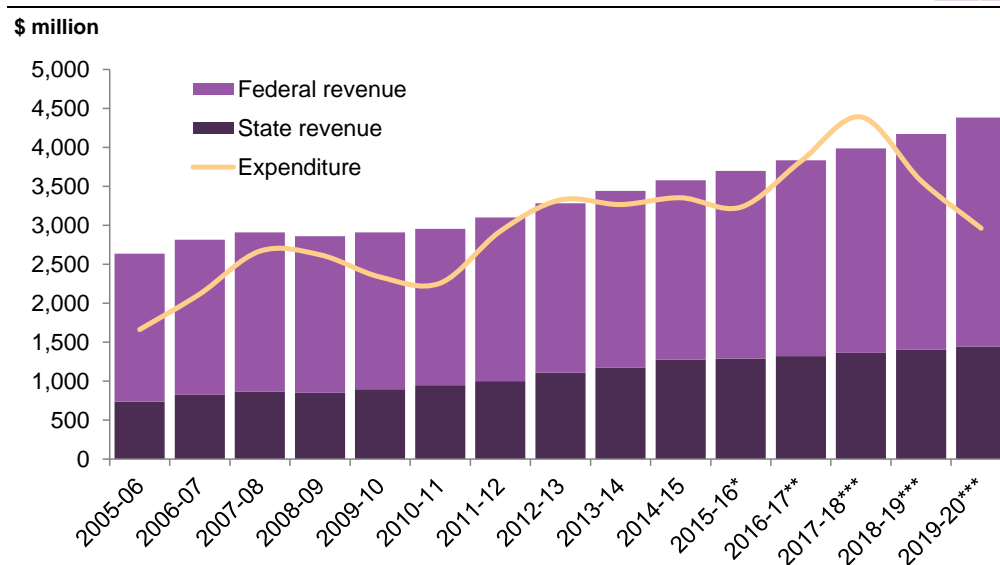
4

TOTAL REVENUE AND EXPENDITURE

ACIL Allen estimates that in 2015-16, total road-related expenditure in Western Australia is expected to be around \$3.2 billion. An expected \$1.3 billion will be collected through the State Government and \$2.4 billion by the Federal Government. Based on these figures, the ratio between road-related expenditure and motorist-related revenue for 2015-16 is 87 per cent. In comparison, updated figures suggest that the 2014-15 ratio was 94 per cent.

Budget forecasts suggest that total Federal and State Government vehicle related revenue collected from Western Australian motorists is expected to reach around \$4.4 billion in 2019-20 of which \$1.4 billion is expected to be collected by the State Government and \$3 billion by the Federal Government. Further, the existing level of road-related expenditure in Western Australia will increase until 2017-18 when the ratio of expenditure to revenue is expected to exceed 100 per cent (reaching 110 per cent). In the last forecast year it is expected to drop to under 70 per cent as the projects currently committed under the Asset Investment Program near completion (see **Figure 4.1**).

FIGURE 4.1 VEHICLE RELATED GOVERNMENT REVENUE AND ROAD EXPENDITURE, HISTORIC AND PROJECTED



* Estimated; ** Budget Estimate; *** Forward Estimate.
Source: ACIL Allen analysis

State Government expenditure on Western Australian roads is typically greater than the value of revenue that it collects from Western Australian motorists. In 2015-16, the State Government estimated that it spent approximately \$1.6 billion⁵ on Western Australian roads and collected approximately \$1.3 billion in revenue from Western Australian motorists.

In contrast, Federal Government expenditure on Western Australian roads is typically less than the value of revenue that it collects from Western Australian motorists. In 2015-16, the Federal Government estimates that it spent approximately \$1.1 billion on Western Australian roads⁶ and collected approximately \$2.4 billion from Western Australian motorists.⁷ In effect, for every dollar of revenue collected by the Federal Government from Western Australian motorists, just under 48 cents is currently approximated to be returned to Western Australia as Federal Government expenditure on Western Australian roads.

In comparison, in 2014-15 the Federal Government returned approximately 34 cents of road related revenue to Western Australia. The disparity is a result of the Federal Government increasing their investment (by \$260 million) into the Main Roads Asset Investment Program in 2015-16. In 2013-14 the Federal Government returned approximately 41 cents of road related revenue to Western Australia.

Local governments will spend approximately \$884 million on Western Australian roads of which \$437 million is funded by Federal or State grants and are therefore included in the above figures. The remaining \$447 million is funded through local government rates.

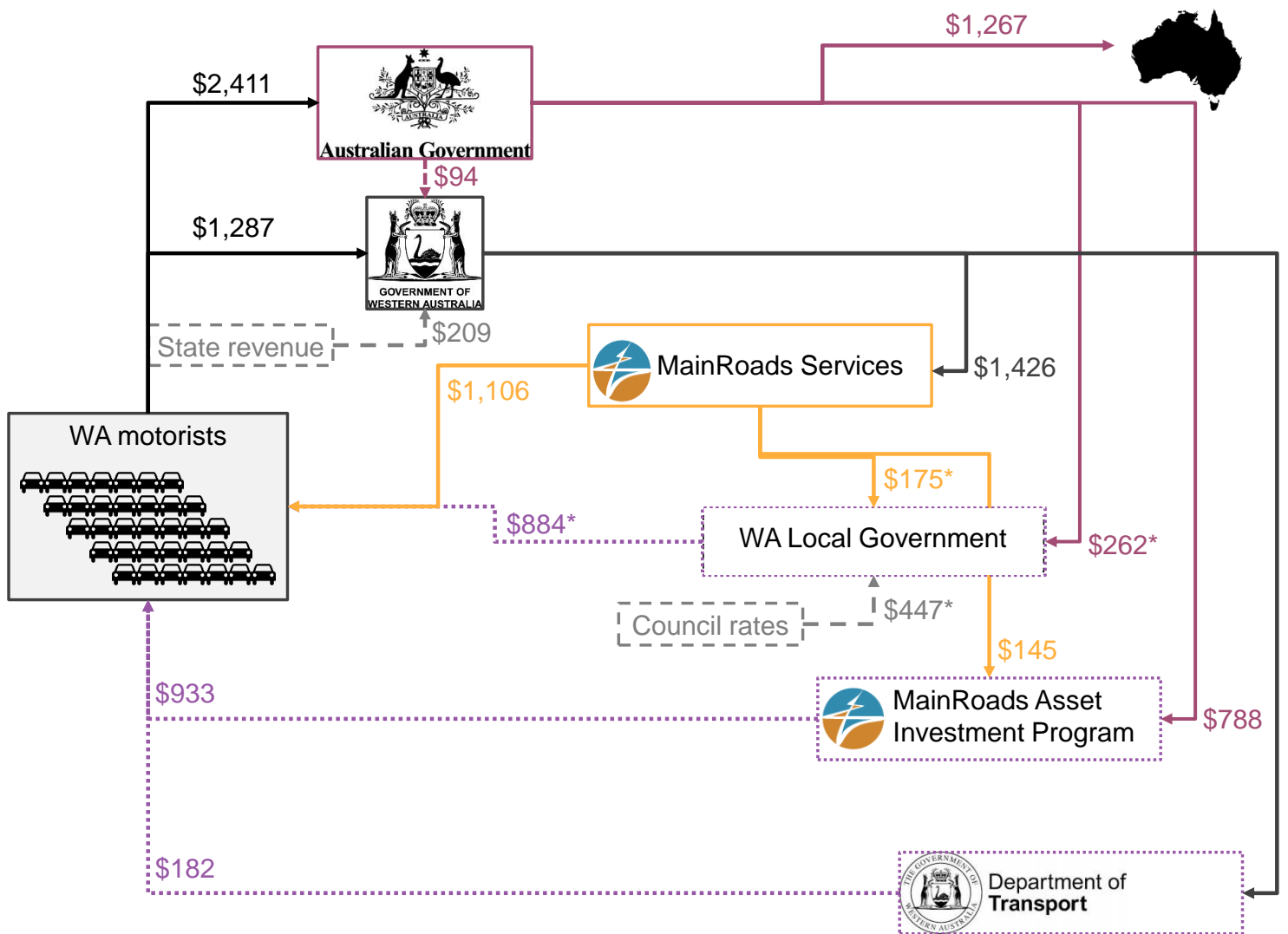
These revenue and expenditure flows are depicted diagrammatically in **Figure 4.2**. A detailed explanation of how the estimates have been derived is provided in Appendix A.

⁵ Made up of \$1.4 billion of direct funds and \$182 million of own source consolidated revenue.

⁶ Made up of direct spending of \$788 million in special purpose payments; \$262 million in the Local Road Financial Assistance Grant; and \$94 million as a result of the Federal Government contribution to State consolidated revenue.

⁷ Collected from GST, excise duty, luxury car tax and customs duties.

FIGURE 4.2 DETAILED VEHICLE RELATED GOVERNMENT REVENUE AND ROAD EXPENDITURE, 2015-16 (\$ MILLION, ROUNDED)



* Extrapolation
Source: ACIL Allen analysis

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BIBLIOGRAPHY

- Australian Bureau of Agriculture and Resources Economics and Science. (2009). *Australian Consumption of Petroleum Products*.
- Australian Bureau of Statistics. (2002). *Cat. 9208.0: Survey of Motor Vehicle Use*.
- Australian Bureau of Statistics. (2005). *Cat. 5514.0: Australian System of Government Finance Statistics: Concepts, Sources and Methods*.
- Australian Bureau of Statistics. (2005). *Cat. 6461.0: Australian Consumer Price Index: Concepts, Sources and Methods*.
- Australian Bureau of Statistics. (2012). *Car Census*.
- Australian Bureau of Statistics. (2013). *Cat. 9314: Sales of New Motor Vehicles*.
- Australian Bureau of Statistics. (2016). *Cat. 5512.0: Government Finance Statistics 2014-15*. Canberra, WA.
- Australian Government. (2005-06). *Budget: Financial Statements*.
- Australian Government. (2006-07). *Budget: Financial Statements*.
- Australian Government. (2007-08). *Budget: Financial Statements*.
- Australian Government. (2008-09). *Budget: Financial Statements*.
- Australian Government. (2009-10). *Budget: Financial Statements*.
- Australian Government. (2010-11). *Budget: Financial Statements*.
- Australian Government. (2011-12). *Budget: Financial Statements*.
- Australian Government. (2012-13). *Budget: Financial Statements*.
- Australian Government. (2013-14). *Budget: Financial Statements*.
- Australian Government. (2014-15). *Budget: Financial Statements*.
- Australian Government. (2015-16). *Budget: Financial Statements*.
- Australian Government. (2016-17). *Budget: Financial Statements*.
- Bureau of Infrastructure, Transport and Regional Economics. (2009). *Australian Transport Statistics Yearbook*.
- Department of Infrastructure and Regional Development. (2014). *Financial Assistance Grants to Local Government*. Retrieved June 10, 2014, from Department of Infrastructure and Regional Development: <http://www.regional.gov.au/local/assistance/>

- The Government of Western Australia. (2005-06). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2006-07). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2007-08). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2008-09). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2009-10). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2010-11). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2011-12). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2012-13). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2013-14). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2014-15). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2015-16). *Budget Paper No. 2 & 3*.
- The Government of Western Australia. (2016-17). *Budget Paper No. 2 & 3*.
- Western Australian Local Government Association. (2012). *Report on local government road assets and expenditure 10/11*.
- Western Australian Local Government Association. (2013). *Report on local government road assets and expenditure 11/12*.
- Western Australian Local Government Association. (2014). *Report on local government road assets and expenditure 12/13*.
- Western Australian Local Government Association. (2015). *Report on local government road assets and expenditure 13/14*.



Below is the apportioning methodology for each motorist related revenue stream, as discussed in Chapter 2.

GST

The GST is apportioned in two steps:

1. Calculation of the amount of GST raised from motor vehicle related transactions, and
2. Determination of Western Australia's contribution to each category.

GST contribution of motor vehicle related transactions

The GST contribution of motor vehicle related transactions is determined by applying the weights of motor vehicle related groups from the Consumer Price Index (CPI) to the total GST revenue. The group specific weight is estimated by the Australian Bureau of Statistics and measures what share of its income an average household spends on a certain good. Therefore it is a good proxy for the share of total spending on this good in Australia and thus the generated GST revenue. ACIL Allen adjusted the weights by excluding GST free products such as dairy products, bread, vegetables etc. from the weighting to ensure consistent results.

Three relevant private expenditure groups were identified: motor vehicle sales, automotive fuels and repairs, accessories etc. The derivation of the adjusted CPI weights is outlined in Table A1.

TABLE A.1 – ADJUSTED CPI WEIGHTS

Goods category	Weight
GST free	9.1%
Dairy	1.5%
Bread/cereal	2.2%
Meat/Seafood	2.6%
Fruit/vegetable	2.3%
Eggs	0.1%
Tea/coffee	0.3%
Adjustment factor	1.1001
Unadjusted motor vehicle related	
Motor vehicles	5.9%
Automotive fuel	4.3%

Goods category	Weight
Repairs, accessories etc.	4.3%
Adjusted motor vehicle related	
Motor vehicles	6.4%
Automotive fuel	4.7%
Repairs, accessories etc.	4.7%

Note: Rounded values
Data Source: Australian Bureau of Statistics, Cat. 9208.0

Western Australian contribution

The GST associated with each these groups generated in Western Australia is calculated by applying the relevant share of consumption of motor vehicles, petrol and vehicle repairs in Western Australia. Statistics for the three groups are provided either by the ABS new car sales (Cat. 9314: Sales of New Motor Vehicles, 2013) and motor vehicle census (Australian Bureau of Statistics, 2012) or by ABARES (Australian Consumption of Petroleum Products, 2009). In order to estimate the Western Australian contribution to Federal tax revenue, ACIL Allen applied 10 year averages of historic data to the national GST revenue of each category (details in Table A2).

TABLE A.2 – WESTERN AUSTRALIAN GST CONTRIBUTION PROXIES

Weight	WA contribution proxy
Motor vehicles	New motor vehicles sales WA / new motor vehicles sales Australia
Automotive fuel	Fuel consumption WA / fuel consumption Australia
Repairs, accessories etc.	Number of cars WA / number of cars Australia

Luxury car tax

The Western Australian contribution to the luxury car tax revenue was estimated by determining the share of luxury cars in the State based on the Motor Vehicle Census 2012 and applying it to the Federal revenue from this tax.

Excise duty on petrol and diesel

Commercial vehicles can reclaim 50 per cent of the excise duty on petrol and diesel. Therefore it is necessary to estimate the fuel consumption of commercial vehicles in Western Australia.

In 2002 the ABS conducted a detailed survey on fuel consumption in Australia in which it reports total fuel consumption in this year of passenger vehicles and commercial vehicles (Cat. 9208.0: Survey of Motor Vehicle Use, 2002). The Bureau of Infrastructure, Transport and Regional Economics (BITRE) in turn, publishes figures on the total number of driven kilometres per year, state and vehicle class (Australian Transport Statistics Yearbook, 2009). From these datasets, ACIL Allen calculated an average consumption per kilometre for both vehicle classes which the number of kilometres travelled in Western Australia by the vehicles of the respective class was applied. This provides an estimate of total fuel consumed in Western Australia by vehicle class and thus the share of excise duty generated in the State.

This number was applied to excise duty revenues for petrol and diesel to correct for the 50 per cent rebate for commercial vehicles.

Customs on passenger motor vehicles

Customs duties are paid on imported vehicles when they enter the country. Since transport to Australia tends to be expensive, it has been assumed that all imported vehicles are new⁸. Therefore the share of new vehicles sold in Western Australia (Cat. 9314: Sales of New Motor Vehicles, 2013) was applied to determine customs revenues attributable to Western Australia.

Derivation of funding sources by level of government for 2015-16

ACIL Allen has undertaken a detailed assessment of road-related revenue and expenditure by level of government for 2015-16 to map the flows of road-related funds to and from governments. In 2015-16:

- Total spending on Western Australian roads is estimated at \$3,233 million.
- Of this amount, approximately \$1,287 million will be directly funded by the State Government through its collection of road-related revenue (primarily vehicle licence fees and motor vehicle registration fees).
- This leaves a preliminary funding gap of just under \$2,000 million.
- Part of this preliminary funding gap will be directly funded by the Federal Government:
 - the Federal Government transferred \$788 million to Western Australia as specific purpose payments related to the Asset Investment Program. This program includes black spot projects, the bridges renewal program, heavy vehicle safety and productivity, a road investment component, the off-network projects program, roads to recovery, and interstate road transport
 - the Federal Government provided \$262 million to Western Australian local governments through the Local Road Financial Assistance Grant.⁹
- After taking these Federal funding sources into account, there remains a funding gap of \$895 million. This is the value of road-related expenditure that cannot be directly attributed to Federal road funds allocated to the State and nor can it be attributed to revenue that the State Government collects from Western Australian motorists.
- The majority of the local government expenditure is funded through council rates. Specifically rate payments contributed \$477 million.
- The majority of the non-federal funds for the Asset Investment Program come from capital appropriation, asset sales conducted by the State Government and from Main Roads internal funds and balances. From these and other sources, the State Government funded \$145 of the program.
- The remaining gap of \$303 million is funded from State Government consolidated revenue. State Government consolidated revenue consists of the State Government's own source revenue collected through its own revenue raising instruments and contributions from the Federal Government (for example GST distributions).
- Using available State Budget data, ACIL Allen estimates that State Government consolidated revenue consists of State Government own source revenue (approximately 68 per cent) and Federal Government grants (approximately 32 per cent).
- Based on the above proportions, ACIL Allen estimates that about \$209 million of the funding gap is funded by the State Government while about \$94 million of the funding gap is ultimately funded by the Federal Government.
- In sum, this means that the **State Government** spent more on roads (approximately **\$1.6 billion**) than it collected from motorists (approximately \$1.3 billion). Whereas the Federal Government allocated about 48 per cent of Federal road related revenue to Western Australia in the form of road spending. That is, the **Federal Government** collected approximately \$2.4 billion from Western Australian motorists and effectively spent approximately **\$1.1 billion** on Western Australian roads. **Local governments** spent approximately \$884 million of which \$437 million are funded by either Federal or State grants and **\$447 million** is self-funded.

⁸ It is recognised that imports of used vehicles do occur, but this does not change the overall conclusions of this report.

⁹ Estimate



ACIL Allen has compiled our estimates by making use of primary sources, such as government budget papers, as it is believed that this to be the most accurate way in which to make the estimates. However, secondary sources also exist, in particular work undertaken by the ABS (Cat. 5512.0: Government Finance Statistics 2014-15, 2016). The estimates of the ABS differ from our estimates, and it is useful to explore what these differences are and how they arise. The two data series are presented in Table B1.

TABLE B.1 – COMPARISON OF ABS AND ACIL ALLEN EXPENDITURE ESTIMATES (\$ MILLION)

Year	ACIL Allen	ABS
2005-06	1,661	798
2006-07	2,118	860
2007-08	2,668	954
2008-09	2,622	876
2009-10	2,336	894
2010-11	2,258	1,021
2011-12	2,924	1,143
2012-13	3,327	1,346
2013-14	3,266	1,482
2014-15	3,354	1,349

Source: ABS and ACIL Allen Analysis

In order to understand this difference, ACIL Allen spoke with the ABS and the Department of Treasury and Finance Western Australia (DTFWA). The methodology ACIL Allen employed in this report was also discussed with these agencies to explore sources of difference.

The ABS only reports operating expenses. For the purposes of this report ACIL Allen regards this definition as too narrow since it excludes the construction and improvement of roads.

Since the ABS definition of road expenses appears too narrow, ACIL Allen numbers have been used as the basis of the analysis.