

TAXING ENERGY OR A ROAD USER CHARGE? AUSTRALIA'S FUEL TAX SYSTEM AT THE CROSSROADS

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ABSTRACT

The Organisation for Economic Co-operation and Development's report, Taxing Energy Use 2019, reveals patterns in the taxation of energy and concludes that the use of energy taxes as a climate policy instrument continues to fall short of its potential across the globe. The position in Australia is noteworthy given that most energy use is not taxed; the major exception being transport fuels. This article examines Australia's transport fuel excise and credit system, and shows that the historical basis for the system weighs heavily on its structure and operation. This stems from the fact that one of the early objectives of taxing transport fuels, by way of customs duties and excise, was to fund the construction and maintenance of public roads. Even though formal hypothecation ceased in the late 1950s, fuel taxes are still seen as a crude road user charge. This drives complexity in the structure of the fuel tax regime, which includes significant effective exemptions for non-transport and non-public road uses of fuel by commercial operators and reduced net fuel tax rates for heavy vehicles using public roads. A variety of factors are putting net fuel excise revenues under pressure and the mechanism that sets the current heavy vehicle user charge has also been the subject of criticism. This article contributes to the current debate regarding the future of road funding by examining another ground for reform: the complexity of the current fuel tax system. The development of alternative road user charge systems could provide the opportunity to fundamentally reform the fuel excise as an environmental tax so as to align the price signal with the environmental costs of using transport fuels across all sectors.

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I INTRODUCTION

In the report *Taxing Energy Use 2019: Using Taxes for Climate Action*, the Organisation for Economic Co-operation and Development (‘OECD’) recognised that energy taxes have the potential to contribute to reaching governments’ environmental policy goals whilst simultaneously improving the performance of the fiscal system.¹ Energy taxes can be a source of revenue to fund government services whilst simultaneously internalising the climate cost of emissions from energy use, sending a price signal to reduce consumption and support the switch to cleaner energy sources. However, the OECD report evidences that ‘governments are not deploying energy and carbon taxes to their full potential.’² The one exception is the case of road transport fuels: the OECD found that all jurisdictions covered by the report had in place fuel excise taxes in relation to the road sector and only three countries of the 44 countries covered by report apply a tax rate below the ‘low-end’ benchmark of EUR30 per tonne of CO₂.³ However, the OECD also observed that, contrary to what environmental policy would dictate, only three countries tax diesel at a higher rate than petrol and two countries tax them at the same rate (per litre).⁴ As a result, from the perspective of the cost to the environment, in most countries diesel is effectively discounted.

The energy tax profile for Australia in the *Taxing Energy Use* report details Australia’s energy tax mix and reveals that, aside from taxing natural gas and liquefied petroleum gas (‘LPG’) used in the residential sector for heating and a low level of tax on certain aviation fuels, the only significant tax on energy use is the tax on gasoline, diesel and other fuels used in road transport.⁵ Like the other countries included in the OECD report, Australia taxes transport fuels by way of excise. As calculated by the OECD, based on the excise rates and exchange rates at the time of the report, the effective fuel tax rates in Australia were approximately EUR115 and EUR80 per tonne of CO₂ for gasoline and diesel, respectively,⁶ well above the OECD’s low-

¹ OECD, *Taxing Energy Use 2019: Using Taxes for Climate Action* (Report, 2019) 3 (‘*Taxing Energy Use*’).

² *Ibid.*

³ *Ibid* 11, 14. Those countries are Brazil, Indonesia and Russia.

⁴ *Ibid* 37-8. The evidence suggests that diesel should be taxed at rates at least as high as those of gasoline.

⁵ *Ibid* 41, Annex Figure 2.A.2. See also OECD, *Taxing Energy Use 2019: Country Note – Australia* (Report, 2019) (supplement to *Taxing Energy Use*) for a more detailed breakdown of the calculation of the effective energy tax rates.

⁶ *Taxing Energy Use* (n 1) 81, Annex Figure 3.A.2.

end environmental tax benchmark of EUR30.⁷ Although the fuel excise rates per litre of both gasoline and diesel are high, what these headline rates do not reveal is that many uses of transport fuels do not bear the full burden of the tax as a result of the fuel tax credit system: the credit operates to refund in full the excise paid on transport fuels used in relation to transportation on private roads as well as the use of those fuels for purposes other than travelling on roads, such as to power auxiliary machinery, and to refund in-part the excise paid on fuel used in heavy vehicles on public roads.⁸

This article's examination of the fuel tax system in Australia reveals that the operation of the system is heavily influenced by its original design as a road funding mechanism based on a user-pays model, with fuel use serving as a proxy for road use. Although formal hypothecation to road funding ceased in the late 1950s, the fuel excise still functions as a quasi road user charge and this has led to significant complexity in the operation of the fuel tax credit element, which seeks to refund the excise in relation to fuel consumption not related to the use of public roads. This contrasts with what the modern lens of climate policy, as applied to evaluate energy taxes by the OECD, would dictate, given that transport fuel consumption has the same environmental impact whether or not associated with public road usage.

Improving fuel efficiency in vehicles and a growing shift to electric cars are putting increasing pressure on net fuel tax receipts. Many governments are setting targets for electric vehicles⁹ and a recent report predicts that, even without government intervention in the market, 22% of new passenger vehicle sales will be electric by 2030.¹⁰ Road tolls and vehicle telemetry

⁷ The Report notes that this low-end carbon benchmark is unlikely to represent the environmental damage caused by emissions and is also unlikely to be sufficient to meet the requirements of the Paris Agreement. *Taxing Energy Use* (n 1) 14.

⁸ Although the OECD Report states that the tax rates are adjusted to take into account refunds available to certain users and sectors, the details of the calculations are not available. *Taxing Energy Use* (n 1) 15; *Taxing Energy Use 2019: Country Note – Australia* (n 5) 3.

⁹ The Australian Government released a short document entitled 'A national strategy for electric vehicles' in early 2019 but no details regarding a strategy have yet been released. In contrast, the NSW Government has committed to 10% of new passenger cars being electric or hybrid by 2020/21 and the Queensland Government has created an 'electric super highway' of charging stations up its east coast. See NSW Government, *NSW Electric and Hybrid Vehicle Plan* (2019); Queensland Government, *The Future is Electric: Queensland's Electric Vehicle Strategy* (2017). The Government of South Australia has also started work on developing a strategy: Government of South Australia, 'Targeted Industry Consultation Discussion Paper & Survey: To support the development of an electric vehicle strategy for South Australia' (2019).

¹⁰ Energeia, *Australian Electric Vehicle Market Study* (Report, May 2018) 70. Energeia prepared this report for the Australian Renewable Energy Agency and the Clean Energy Finance Corporation. Under the report's preferred moderate intervention scenario, electric car sales would be 49% of all sales by 2030.

systems, such as being trialled in relation to heavy vehicles, can serve as a direct user-pay system and could also incorporate congestion charging. These developments offer an opportunity for a broad rethink of the fuel tax system. If an effective and more direct user-pays system can be implemented (which could potentially be earmarked as funding to support road infrastructure), the fuel excise system could be reformed to instead be driven by environmental policy goals. These suggestions are not novel,¹¹ but the analysis provided in this article contributes to and further supports the case for reform by highlighting the legal and administrative complexity of the fuel tax, drawing together data on the operation of the current fuel tax credit system and an analysis of the legal framework.

The structure of this article is as follows. Part 2 places the fuel tax in context of the broader tax system in Australia, provides a brief summary of the history of the fuel tax system, and outlines the current structure of the excise system. Part 3 provides an overview of the fuel tax credit system and provides some statistics on the scale and distribution of fuel tax credits. Part 4 examines the legal framework that provides fuel tax credits and highlights some of the features of the system that leads to its complexity. Part 5 provides a brief overview of various calls for reform to date and suggests an approach that supports the development of direct user-pay systems for both heavy and light vehicles, to replace the reliance on fuel tax as a proxy for road use. A detailed analysis of these proposals is outside the scope of this article but reform of the fuel tax system seems inevitable. Part 6 concludes. Consideration of other tax instruments applicable to petroleum production or products aside from fuel tax, such as the Petroleum Resource Tax, is also beyond the scope of this article.¹² For current purposes, the term ‘transport fuels’ will be used to refer, collectively, to liquid petroleum products (petrol/gasoline and diesel), LPG, compressed natural gas (‘CNG’), ethanol and other biofuels. All monetary values are in Australian dollars unless otherwise stated.

¹¹ The most recent contribution to this reform discussion, released in July 2020, is NSW Government, *NSW Review of Federal Financial Relations: Supporting the Road to Recovery* (Draft Report, July 2020) (‘*NSW Review of Federal Financial Relations*’). Chapter 8 focuses on road funding and fuel taxes and makes reference to a number of the recent reports and reviews. See footnote 86 and references therein.

¹² Diane Kraal has recently published analysis of the 2017 review of this tax. See Diane Kraal, ‘Petroleum Resource Rent Tax Review 2017: Split priorities found in public submissions’ (2018) 33(2) *Australian Tax Forum* 343; Diane Kraal, ‘Review of Australia’s Petroleum Resource Rent Tax: Implications from a case study of the Gorgon Gas Project’ (2017) 45(2) *Federal Law Review* 315.

II AUSTRALIA'S CURRENT FUEL TAX SYSTEM

Australia's current federal tax mix relies heavily on income taxes and to a lesser extent on indirect taxes. The most recent breakdown provided by the Australian Government Budget Papers shows that, for the 2018-19 financial year, 74% of taxation receipts came from income taxes (which includes corporate tax), whilst the balance came from indirect taxes.¹³ The main sources of indirect taxes are the Goods and Services Tax ('GST') (57% of indirect taxes), excise and customs duty¹⁴ on fuel products (largely petrol and diesel excise) (17% of indirect taxes and 4.4% of total tax revenues with a value of \$19,770m), and excise on tobacco (11% of indirect taxes).¹⁵ Petrol and diesel are effectively taxed twice, being first subject to excise or customs duty on a volumetric basis and then 10% GST on an ad valorem, excise-inclusive basis. Based on a pump price of \$1.50 per litre for unleaded petrol, approximately 37% of that price represents taxes.¹⁶

A *A Brief History of the Fuel Tax System*

In order to appreciate the current structure of the fuel tax system, it is instructive to consider its history. This history reveals a persisting tension in road funding that stems from the Federal Government having access to a greater variety of revenue raising mechanisms whilst the Australian States and Territories have the responsibility to provide and maintain road

¹³ Australian Government, *Budget 2019-20, Budget Paper No 1*, Statement 4: Revenue, Table 7. Income tax receipts of \$332,970m (individuals and companies combined) out of a total taxation receipts of \$448,821m for the 2018-19 financial year.

¹⁴ Excise applies to fuels produced or manufactured in Australia whilst customs duty applied to excise equivalent goods ('EEGs'). As transport fuels are subject to excise, imported fuels are EEGs. The physical control of fuels subject to customs duty is managed by the Department of Home Affairs but since 2010 the administration of the duty has been under the auspices of the ATO, though the payment is still made to the Department. See Department of Home Affairs, 'Administration of excise equivalent goods from 1 July 2010' (Web Page) <https://www.homeaffairs.gov.au/Importingandbuyinggoodsfromoverseas/Documents/eeg_reference_guide.pdf>.

¹⁵ Australian Government, *Budget 2019-20, Budget Paper No 1*, Statement 4: Revenue, Table 7. Indirect tax receipts totalled \$115,851m for the 2018-19 year, GST receipts of \$65,783m, excise and customs duty on transport fuels \$19,770m, and tobacco excise \$12,850m.

¹⁶ As prices are required to be advertised as a GST-inclusive amount, \$0.136 would be GST plus the current excise rate of \$0.423 per litre.

infrastructure. Relevantly, the *Australian Constitution* grants to the Federal Government the exclusive power to impose duties of custom and excise.¹⁷

As one of the early pieces of legislation enacted by the newly constituted Commonwealth of Australia, the *Customs Duty Act 1901* (Cth) imposed duty on, amongst other products, imports of gasoline and other oils used for heating, lighting and as industrial solvents.¹⁸ With the introduction and growing take up of automobiles in the 1920s, the duty effectively became largely a tax on transport fuels.¹⁹ The 1920s also saw the establishment of domestic refineries and therefore local fuel products, so from 1929, excise was applied to domestic petroleum products and, importantly, fuel excise revenue was from that time hypothecated to road funding.²⁰ The fuel tax system was extended to diesel in 1957, along with an exemption certificate system for off-road use.²¹ This reinforced the link to road funding given that the excise thereby effectively only applied to on-road use.²² In 1959, formal hypothecation ended and grants to the states to fund road infrastructure under the *Commonwealth Aid Roads Act 1959* (Cth) were sourced from consolidated revenue.²³ Several other legislative efforts saw some excise revenue earmarked to road projects²⁴ but since the early 1990s, road funding has been part of the general federal government budget process. Even though hypothecation was abandoned, analyses of the fuel excise system and government provision of roads almost invariably continue to compare fuel excise and other identified sources of ‘road-related revenue’ (such as vehicle registration and stamp duty) to levels of funding for road infrastructure.²⁵

¹⁷ *Commonwealth of Australia Constitution Act 1900* (Imp) 63 & 64 Vict, c 12, s 90.

¹⁸ Government of Australia, Treasury, *History of Fuel Taxation in Australia* (Report, 2001) 1-2, n 4 (‘*History of Fuel Taxation*’).

¹⁹ *Ibid.*

²⁰ *Ibid* 2.

²¹ *Ibid* 6.

²² For a detailed history of Commonwealth road funding legislation up to the mid-1970s see RH Burke, Bureau of Transport Economics, *Occasional Paper No 8: History of Commonwealth Government Legislation relating to Roads and Road Transport 1900-1972* (Occasional Paper, 1977) available at: <https://www.bitre.gov.au/sites/default/files/op_008.pdf>.

²³ *Ibid* 7.

²⁴ See, eg, *Australian Bicentennial Road Development Trust Fund Act 1982* (Cth); *Australian Land Transport Development Act 1988* (Cth).

²⁵ See, eg, Commonwealth of Australia, *Australia’s Future Tax System* (Final Report, 2010), Pt 2, 375-6 (‘*Henry Review*’); Australian Government, Department of Infrastructure, Transport, Cities and Regional

The States and Territories have also had a role in the taxation of fuels. Although they do not have the power to impose excise, the States began to impose ‘business franchise taxes’ in the form of licence fees to sell certain products, where the fee was an ad valorem component based on sales.²⁶ Early petrol franchise fees in the mid-1970s were short-lived but, after protests over road maintenance charges led to their repeal, fuel franchise schemes were re-introduced across most states in the early 1980s.²⁷ By 1995-6, petroleum business franchise fees were raising \$1,531m across the States.²⁸ This all came to an abrupt end when, in 1997, the High Court of Australia handed down a decision invalidating the tobacco business franchise fee of NSW as unconstitutional.²⁹ Given that the fuel and other franchise fees were based on the same legislative model, the effect of the decision was to disallow all of these fees. In response, the Commonwealth instituted a ‘stop gap’ measure whereby it increased its taxes on the affected products, including transport fuels, and provided this revenue to the states.³⁰ This temporary arrangement was unwound with the introduction of the GST in 2000.³¹ An important feature of the GST system is that the GST revenue is collected by the Australian Taxation Office (‘ATO’), under federal legislation, but this revenue is wholly distributed to the States.³²

As indicated above, the view of fuel taxes as a source of funding for roads was the basis for the introduction of the exemption certificate system for off-road use of diesel in 1957. This was replaced with a rebate scheme in 1982 for certain sectors of the economy (mainly mining and

Development, Bureau of Infrastructure, Transport and Regional Economics (BITRE), *Australian Infrastructure Statistics Yearbook 2019* (2019) Pt T (Transport) (‘*BITRE Statistics Yearbook 2019*’); Infrastructure Partnerships Australia, *Road Pricing and Transport Infrastructure Funding: Reform Pathways for Australia, Discussion Paper* (2013) ch 2.

²⁶ Australian Parliament, ‘Federalism up in Smoke? The High Court Decision on State Tobacco Tax’ Current Issues Brief No 1 1997-98 (1999) 6.

²⁷ *Ibid.*

²⁸ *Ibid* 7.

²⁹ *Ha and Anor v State of NSW; Walter Hammond & Assoc v State of NSW* (1997) 189 CLR 465.

³⁰ *History of Fuel Taxation* (n 18) 9.

³¹ Australian Parliament, Parliamentary Library, ‘Petrol and Diesel Excises’ Research Paper No 6 2000-01 (2000) 12. Excise rates were reduced by around 6.7 cents with the introduction of the GST but excise rates have since increased due to the six-monthly indexation mechanism. *History of Fuel Taxation* (n 18) 9.

³² Council of Australian Governments, *Intergovernmental Agreement on Federal Financial Relations* (2008) available at: <http://www.federalfinancialrelations.gov.au/content/intergovernmental_agreements/IGA_federal_financial_relations_aug11.pdf>.

agriculture).³³ Because the diesel fuel rebate rate was not linked to the excise rate, a gap developed after 1983 so that a full rebate was effectively no longer available, and some off-road activities were not eligible for the rebate at all. The reforms accompanying the introduction of the GST returned the system to a full rebate basis and extended eligibility to certain other off-road sectors, such as rail transport and marine use.³⁴ The transition to the current fuel tax credit system under the *Fuel Tax Act 2006* (which, contrary to its name, is actually the legislation providing the fuel tax credits) was phased in over the period of 2006 to 2012 and through these measures, relief from fuel tax was expanded to industrial uses broadly.³⁵ The current credit system is described below.

The other area of development has been the treatment of alternative fuels. In 1979, excise was eliminated for LPG and CNG, and ethanol became duty free in 1980 and, from 1994, excise free when blended with petrol.³⁶ The contractually-based federal government Ethanol Production Grants Programme reduced effective excise on domestically produced fuel ethanol to nil – this program ceased on 30 June 2015 after a government report concluded that it had little merit (the estimated cost of emissions reduction from a switch to E10 petrol mix was \$274 per tonne of CO₂ and the program only benefitted three producers).³⁷ Similarly, the *Energy Grants (Cleaner Fuels) Scheme Act 2004*, which effectively reduced the excise on biodiesel to nil, was also repealed as at 30 June 2015. From that date forward, these alternative fuels have been subject to excise but initially at a nil rate, with a long phase-in time to, ultimately, reach only a fraction of the full excise rate (the rate on fuel ethanol rose to 32.77% of the petrol rate on 1 July 2020³⁸ and the rate on biodiesel is due to rise to 50% of the diesel rate (which is the same rate as petrol) by 1 July 2030).³⁹

³³ *History of Fuel Taxation* (n 18) 10.

³⁴ *Ibid* 15.

³⁵ *Fuel Tax (Consequential and Transitional Provisions) Act 2006* (Cth).

³⁶ *History of Fuel Taxation* (n 18) 16.

³⁷ Australian Government, Bureau of Resource and Energy Economics, *An assessment of key costs and benefits associated with the Ethanol Production Grants program, A report for the Department of Industry* (Report, 2014) 18.

³⁸ *Excise Tariff Act 1921* (Cth) s 6H.

³⁹ See Richard Webb, 'Taxation treatment of ethanol and biodiesel' (Australian Parliament, Parliamentary Papers, Budget Review 2014-15). These measures were enacted through *Excise Tariff Amendment (Ethanol and Biodiesel) Act 2015* (Cth).

B *The Current Fuel Excise Regime*

The rates and system for the collection of excise are found in the *Excise Tariff Act 1921* (Cth) whilst customs duty operates under the *Customs Tariff Act 1995* (Cth) and is designed to match the excise rates.⁴⁰ Excise rates are currently indexed bi-annually in line with the consumer price index and the current rates (from 3 February 2020) are: gasoline and diesel \$0.423 per litre; LPG \$0.138 per litre; CNG \$0.290 per kg; denatured ethanol for use in internal combustion engine \$0.111; and biodiesel⁴¹ \$0.056. The most recent figures available for the collection of excise and customs duty on fuel products are as follows.

TABLE 1 – CASH RECEIPTS FOR EXCISE AND CUSTOMS DUTY⁴²

PRODUCT	2018-19 ACTUAL (\$M)	2019-20 ESTIMATE (\$M)
Petrol	6,000	6,350
Diesel	11,550	12,300
Other fuel products	2,220	2,280
Total	19,770	20,930

The tax gap on fuel excise has been measured by the ATO as quite low, only 1.3% for the 2017-18 year⁴³ (compared to, for example, the small business income tax gap of 12.5%).⁴⁴

What these figures alone do not reveal is the *net* effect of excise and customs once the fuel tax credit scheme is taken into account. Although the receipts from customs and excise flow into consolidated revenue and are no longer earmarked for road funding, the continued link to roads is revealed through the operation of the fuel tax credit ('FTC') system. The impact of the fuel excise is in effect limited to public road use and is reversed in relation to private road and non-road use of transport fuels. Through this mechanism, the fuel excise serves as a rough proxy

⁴⁰ See Australia, Department of Home Affairs, Notice No 2018/03, Table 1 Excise Equivalent Goods.

⁴¹ The meaning of 'biodiesel' is given at s 3 of the *Excise Tariff Act 1921* (Cth) to mean 'mono-alkyl esters of fatty acids of a kind used as a fuel, derived from animal or vegetable fats or oils whether or not used'.

⁴² Australia, *Budget 2019-20, Budget Paper No 1: Budget Strategy and Outlook 2019-20*, Statement 4: Revenue, Table 7: Australian Government general government (cash) receipts.

⁴³ For the ATO's research on the tax gap see ATO, 'Fuel Excise Tax Gap' (Web Page) <<https://www.ato.gov.au/About-ATO/Research-and-statistics/In-detail/Tax-gap/Fuel-excise-tax-gap/>>.

⁴⁴ ATO estimate for the 2015-16 year, see ATO, 'Tax Gap Program Summary Findings' (Web Page) <https://www.ato.gov.au/About-ATO/Research-and-statistics/In-detail/Tax-gap/Australian-tax-gaps-overview/?page=5#Income_based_taxes_summary>.

for a user charge, however the amount payable is based on the quantity of fuel used rather than actual use of public roads.

III THE OPERATION OF THE FUEL TAX CREDIT SYSTEM

A *Overview of the System*

Under the *Fuel Tax Act 2006* (Cth) ('FTA'), certain taxpayers who have acquired and consumed fuel subject to fuel excise or customs duty can apply to the ATO for a credit (refund) of that tax. Under Division 41 of the FTA, fuel tax credits are made broadly available to business taxpayers and some non-profit bodies (where the fuel is used in a vehicle providing emergency services). Eligibility of 'business taxpayers' requires that the taxpayer is registered for GST and the fuel is used in carrying on the enterprise.⁴⁵ Credits are also available for fuel supplied for domestic heating, packaged for supply (limited types) and LPG supplied to tanks (small, residential use, not to supply motor vehicles).⁴⁶ An important limitation is that no credit is available for fuel used in light vehicles travelling on public roads, even if this travel is connected with a business enterprise.⁴⁷ Non-business taxpayers are only entitled to credits for fuel used to generate electricity for domestic use.⁴⁸

The amount of credit available to business taxpayers is partial (rather than full) if the fuel is used in heavy vehicles (with a gross vehicle mass of more than 4.5 tonnes) travelling on public roads for business purposes. The amount of the credit is limited to the 'road user charge' ('RUC') on the basis that operators of heavy vehicles on public roads pay a lower (net) fuel excise but also pay high heavy vehicle registration charges collected at the State level – these two components are seen together as forming the user charge system for heavy vehicles. The RUC is determined by legislative instrument and corresponds to an amount agreed upon by Commonwealth and State governments through the Transport and Infrastructure Council. The

⁴⁵ *Fuel Tax Act 2006* (Cth) s 41-5 ('*Fuel Tax Act*'). For an analysis of some of the issues that arise from the requirement that the taxpayer acquire and use the fuel see ATO, Fuel Tax Ruling FTR 2009/1: 'Fuel tax: entitlement to a fuel tax credit under section 41-5 of the *Fuel Tax Act 2006* in a vehicle or equipment hire arrangement' (2009).

⁴⁶ *Fuel Tax Act* (n 47) s 41-10.

⁴⁷ *Ibid* s 41-20.

⁴⁸ See ATO, PCG 2016/3: 'Fuel tax credits – fuel tax credit rate for non business claimants' (2016), which sets out a simplified basis for determine fuel tax credit entitlements for non business taxpayers in relation to the generation of electricity and the use of fuel by non-profits bodies in emergency vehicles.

current rate of \$0.258 (set in 2017 and frozen through 2020-21) means that heavy vehicles are subject to a (net) fuel excise rate of \$0.165 per litre.⁴⁹ The States and Territories work together to coordinate heavy vehicle registration charges, which they collect directly. The charge consists of a road component and a regulatory component and varies depending on the type and size of vehicle and trailers.⁵⁰ The combined effective of the fuel excise and FTC system is as follows.

TABLE 2 – EFFECTIVE FUEL TAX RATES BY TAXPAYER TYPE AND USE OF FUEL

TAXPAYER TYPE	USE OF FUEL	LEVEL OF FUEL TAX CREDIT	EFFECTIVE FUEL EXCISE RATE
Business taxpayers	Off road – any vehicle or any other use	Full	Nil
	Public road – light vehicle	None	Full rate = \$0.423
	Public road – heavy vehicle	Reduced by user charge	\$0.423 – \$0.258 = \$0.165
Non-business taxpayers	Electricity generation	Full	Nil
	All other uses	None	Full rate = \$0.423

The amount of excise refunded by way of the FTC system is quite substantial, amounting to roughly 35% of receipts. The Australian Government has made forward estimates of the gross cash receipts and estimated credits to be provided, which produces the net figures as provided at Table 3 below.

TABLE 3 – NET FUEL EXCISE (FUTURE ESTIMATES)⁵¹

YEAR	CALCULATION BASIS	FUEL EXCISE AND CUSTOMS DUTY (\$M)	FUEL TAX CREDIT SCHEME (\$M)	NET FUEL EXCISE (\$M)
2018-19	Estimate	19,770	7,168	12,602
2019-20	Estimate	20,930	7,504	13,426

⁴⁹ Fuel Tax (RUC) Determination 2017 (F2017L00532).

⁵⁰ The registration charges are laid out in the Heavy Vehicle Charges Model Law based on recommendations of the National Transport Commission to the Transport and Infrastructure Council.

⁵¹ The total fuel excise and customs duty figures were calculated from the data provided in *Budget 2019-20, Budget Paper No 1: Budget Strategy and Outlook 2018-19*, Statement 4: Revenue, Table 7: Australian Government general government (cash) receipts. The figures for fuel tax credits are sourced from Statement 5: Expenses and Net Capital Investment, Table 12.1: Trends in the major components of fuel and energy sub-function expenses.

2020-21	Estimate	21,540	7,937	13,603
2021-22	Projection	22,510	8,424	14,086
2022-23	Projection	23,760	8,966	14,794

The increase in real terms of fuel tax credits (calculated by Treasury as 2.6% from 2018-19 to 2019-20 and 11.4% from 2019-20 to 2022-23) is projected to be due to increased use of fuels eligible for the scheme.⁵²

B *Quantum and Distribution of Credits*

The sectors benefitting from the fuel tax credit system can be identified by examining the *Taxation Statistics* report released by the ATO annually.⁵³ The detailed tables supporting the *Taxation Statistics 2017-18* (the most recent available) report the value of the fuel tax credits processed by the ATO up to the 2018-19 year and these have been aggregated by the author by broad industry group to produce the figures in Table 4 below.

TABLE 4 – VALUE OF FUEL TAX CREDITS (2018-19)⁵⁴

BROAD INDUSTRY GROUPING	VALUE OF CREDITS (\$M)
Agriculture, Forestry and Fishing	839.5
Mining	3,184.1
Manufacturing	274.3
Electricity, Gas, Water and Waste Services	167.1
Construction	469.9
Wholesale Trade	114.0
Retail Trade	62.9
Accommodation and Food Services	11.8
Transport, Postal and Warehousing	1,385.6
Information Media and Telecommunications	1.7
Financial and Insurance Services	89.9

⁵² Australia, Treasury, *Budget 2019-20, Budget Paper No 1: Budget Strategy and Outlook 2018-19*, Statement 5: Expenses and Net Capital Investment, 5-31.

⁵³ ATO, *Taxation Statistics 2017-18* (Web Page, 2020) <<https://www.ato.gov.au/About-ATO/Research-and-statistics/In-detail/Taxation-statistics/Taxation-statistics-2017-18/>>.

⁵⁴ Ibid Excise - Table 4.

Rental, Hiring and Real Estate Services	52.9
Professional, Scientific and Technical Services	224.2
Administrative and Support Services	61.0
Public Administration and Safety	89.6
Education and Training	4.6
Health Care and Social Assistance	2.1
Arts and Recreation Services	4.7
Other Services	43.4
Other	53.9
Total	7,137.2

In some of these sectors, taxpayers would benefit from a full credit for the excise due to use of fuel in relation to off-road transport whilst in others the credit will only be net of the RUC. The two largest sectors (by value of credit claims paid) would likely represent each of these situations. The mining sector receives approximately 44.6% of the credits by value, likely due to their use of fuel in relation to equipment and off-road transportation (including on private mining roads). The second largest sector (by value of claims paid) is transport at approximately 19.4% of claims paid, where this is likely to represent credits for on-road use reduced by the RUC.

IV COMPLEXITY IN THE DESIGN OF THE FTC SYSTEM

As mentioned in the history snapshot above, initially non-road use of fuels was excluded from fuel excise through an exemption system but, to improve administration, this was changed to the credit system that now operates. However, the operation of the current system has its own administrative challenges. The resulting FTC system is one where administrative and compliance costs are incurred to collect and then refund back approximately one-third of fuel tax receipts. By the ATO's estimates, the complexity of the system has resulted in under-claiming of credits (so overpayment of tax) to produce a small negative fuel tax credit gap of -0.1% (that is, under-claimed credits exceeded over-claimed credits).⁵⁵ This section explores some of the more significant sources of complexity.

⁵⁵ Fuel tax credits gap, estimate for 2017-18 year at -0.1% or -\$5.7m. Source: ATO (n 43).

A *Changing Excise Rates and the Mechanics of Claiming the Credit*

The FTC is claimed as part of the business activity statement ('BAS') lodgement cycle, a system that provides for periodic reporting and netting off payments due to the ATO (such as pay-as-you-go income tax instalments and GST liabilities) and refunds payable by the ATO (for example, FTC and GST refunds). The amount of FTC that can be claimed depends upon the type of fuel, when the taxpayer acquired the fuel, and its use. Although the fuel user does not pay the fuel tax directly (as this is paid by the importer or manufacturer), the user effectively bears the burden of the tax as it is incorporated into the price. Recognising the complexity, the ATO has developed a number of online tools and smartphone applications to assist taxpayers in working out their eligibility and claimable amount.

A government decision to halt the indexation of fuel excise in 2001 contributed significantly to what was estimated in 2014 to be a 30% fall in real terms of net fuel tax revenue.⁵⁶ Indexation resumed on 1 August 2014 on a bi-annual basis and, as the fuel excise rate changes, so too does the FTC entitlement. Unfortunately, the timing of indexation does not align with BAS lodgement, so that BAS periods must often be split to reflect the two rates applicable within a period. By way of an administrative concession, the ATO allows a simplified system to be used where less than \$10,000 in FTC is claimed, such that taxpayers can use the rate at the end of the period rather than the two rates.⁵⁷ An ATO online calculator assists in calculating FTC by providing the relevant rate once the purchase period is identified and simplified rules are also available for working out the cost of fuel purchased and in relation to record keeping requirements.⁵⁸

B *Apportionment Between Public and Private Roads*

The FTC otherwise available under the FTA for fuel used in carrying on an enterprise is eliminated for fuel used in a light vehicle travelling on a public road⁵⁹ and reduced by the RUC in relation to heavy vehicles to the extent that the taxpayer acquires 'taxable fuel to use, in a

⁵⁶ Productivity Commission, *Public Infrastructure Inquiry Report* (Report, 2014) 154.

⁵⁷ ATO, Practical Compliance Guideline PCG 2016/2: 'Fuel tax credits – practical compliance methods for small claimants' (2016).

⁵⁸ *Ibid.* For record keeping requirements more generally see ATO, Fuel Tax Determination FTD 2006/2: 'Fuel tax: What records are required to be kept by taxpayers to substantiate a claim for a fuel tax credit?' (2006).

⁵⁹ *Fuel Tax Act* (n 47) s 41-20.

vehicle, for travelling on a public road’,⁶⁰ but this reduction does not apply ‘if the [heavy] vehicle’s travel on a public road is incidental to the vehicle’s main use’.⁶¹ One issue that arises is whether a road is a public road.

1 *Is the Road a Public Road?*

The term ‘public road’ is not defined in the FTA and therefore takes its ordinary meaning. The Explanatory Memorandum that accompanied the introduction of the Fuel Tax Bill provided a list of examples where a road is a public road⁶² and these have been included in the ATO’s public advice on the matter.⁶³ A public road includes a road opened, declared or dedicated as a public road under a statute, a road under government authority to control and maintain as a public road, and a road dedicated as a public road at common law.⁶⁴ Examples of roads that are not public roads are forestry roads, private access roads for mining, and roads over private land that have not been dedicated as public roads.⁶⁵ Further consideration by the ATO effectively excludes travel on a public road if that road is under construction, repair or maintenance and the vehicle is moving on that road as part of the undertaking of that work.⁶⁶

The meaning of ‘public road’ was recently considered by the Full Federal Court in *Linfox Australia Pty Ltd v Commissioner of Taxation* in the context of addressing whether toll roads that are operated and maintained by private operators are public roads.⁶⁷ The taxpayer, Linfox, had sought to draw the link between the funding of roads and the taxing of transport fuels as a basis for arguing that fuel used in relation to travelling on a toll road should not be taxable as the government is not responsible for toll road maintenance. The Court responded in this way:

While the reference to a heavy vehicle shows that it is likely there will be some relationship between the rate of the road user charge, as determined, and the need for maintenance of roads

⁶⁰ Ibid s 43-10(3).

⁶¹ Ibid s 43-10(4).

⁶² Explanatory Memorandum, Fuel Tax Bill 2006, para 2.50.

⁶³ ATO, Fuel Tax Ruling FTR 2008/1: ‘Fuel tax: Vehicle’s travel on a public road that is incidental to the vehicle’s main use and the RUC’ (2008 and most recently amended 2017) (‘FTR 2008/1’).

⁶⁴ Ibid paras 43D-46 and 121-129C.

⁶⁵ Explanatory Memorandum, Fuel Tax Bill 2006, paras 2.51-2.53.

⁶⁶ FTR 2008/1 (n 64) para 22.

⁶⁷ *Linfox Australia Pty Ltd v Commissioner of Taxation* [2019] FCAFC 131 (21 August 2019) (‘*Linfox*’).

surfaces, that relationship is insufficient to persuade us of the conclusion for which the applicant [Linfox] contends, which is that acquiring taxable fuel to use in a vehicle for travelling on a public road excludes acquiring fuel for use for travelling on these toll roads.⁶⁸

Instead, the Court concluded that the notion of ‘public road’ was ‘more closely aligned’ with an entitlement or right of access of the public to use the road, which would include toll roads.⁶⁹

2 *Incidental Travel*

A second issue is whether the travel of a heavy vehicle on a public road is ‘merely incidental’ so that it will not trigger the RUC reduction of the FTC. The Explanatory Memorandum to the Fuel Tax Bill provided that ‘[i]ncidental use of fuel may occur when a vehicle that is used almost exclusively off a public road, is moved a short distance from one off-road location to another via a public road or is operating incidentally on a public road.’⁷⁰ So, for example, the ATO considers that the travel of a harvester from one part of a farm a limited distance on a public road to another part of the farm will be incidental,⁷¹ such that no apportionment of fuel use to travel on public roads is required. On the other hand, in the ATO’s view, the travel of a special purpose vehicle (such as a mobile crane) from the place it is garaged to and from the work site will be integral to its use rather than incidental,⁷² so apportionment would be necessary.

C *Apportioning the Use of Fuel Across Different Vehicle Elements and Usages*

Another aspect of the complexity that is inherent in the current FTC system stems from the need to determine the specific use of the fuel. If the fuel is for use ‘in a [light] vehicle ... travelling on a public road’ there is no credit available⁷³ but if it is used in a heavy vehicle and if it is ‘fuel to use, in a vehicle, for travelling on a public road’, the credit is available but reduced by the RUC.⁷⁴ As a corollary, fuel used in a heavy vehicle but not for travelling on a

⁶⁸ Ibid [111].

⁶⁹ Ibid [113], [118].

⁷⁰ Explanatory Memorandum, Fuel Tax Bill 2006, para 2.80.

⁷¹ FTR 2008/1 (n 64) paras 67-68. See also ATO, PCG 2016/4: ‘Fuel tax credits – incidental travel on public roads by certain vehicles’ (2016).

⁷² FTR 2008/1 (n 64) para 63.

⁷³ *Fuel Tax Act* (n 47) s 41-20.

⁷⁴ Ibid s 43-10.

public road is fully creditable. The interpretation of these phrases has caused some difficulty. The term ‘vehicle’ is not defined in the legislation but the ATO has provided its interpretation in a fuel tax ruling: a vehicle includes any vehicle, plant, machinery or other equipment that is capable of locomotion (and need not be self-propelled) and which may be authorised to travel on a public road by the relevant road traffic authority.⁷⁵ This is a broader concept than ‘motor vehicle’ and would include, for example, a forklift, street sweeper or garbage truck.⁷⁶

In a 2012 decision, the Administrative Appeals Tribunal (‘AAT’) considered whether the RUC reduction to the credit applied to take into account the use of fuel in powering air conditioning units in refrigerated transport trailers used to transport perishable goods.⁷⁷ The equipment used by the taxpayer, again Linfox, was such that the fuel supply to the refrigeration unit was separate to the fuel supply for the prime mover. The taxpayer accepted that the trailers were vehicles so the focus on the AAT decision was on whether the fuel designated for the air conditioning units was for use ‘for travelling’.⁷⁸ The rule applicable to light vehicles does not contain the same ‘for’ travelling requirement and instead denies the credit for ‘all on-road applications of taxable fuel in the vehicle.’⁷⁹ The AAT considered that the use of the preposition ‘for’ preceding ‘travelling’ was critical and limited the road use charge to fuel used to propel the vehicle.⁸⁰ As a result, the full FTC was available for the fuel used in the refrigeration units.

However, a more recent decision of the AAT in 2019 (also stemming from an application by Linfox as taxpayer) disagreed.⁸¹ Justice Jagot, sitting as Deputy President of the AAT, did not accept that ‘for travelling’ was limited to ‘mere propulsion’⁸² and concluded that fuel used in air conditioning the driver’s cabin in relation to the journey of a heavy vehicle on a public road

⁷⁵ FTR 2008/1 (n 64) paras 11-13.

⁷⁶ *Ibid* para 100.

⁷⁷ *Linfox Australia Pty Limited v Commissioner of Taxation* [2012] AATA 517, (2012) 89 ATR 931 (‘*Linfox 2012*’).

⁷⁸ *Ibid* [32].

⁷⁹ *Ibid* [43].

⁸⁰ *Ibid*. See also ATO, Fuel Tax Determination FTD 2016/1: ‘Fuel tax: fuel tax credits – fuel used for idling and cabin air-conditioning of a vehicle on a public road’ (2016).

⁸¹ *Linfox Australia Pty Limited v Commissioner of Taxation* [2019] AATA 222. This issue was not contested as part of the appeal to the Full Federal Court, see (n 68).

⁸² *Ibid* [37].

was ‘for travelling’ and therefore the FTC was reduced by the RUC.⁸³ The rules of precedent do not operate with respect to decisions of the AAT but the ATO’s decision impact statement in relation to the 2019 Linfox litigation states that it intends to apply the 2019 AAT decision (which has the effect of reducing the availability of the FTC) on this point.⁸⁴ The ATO has further stated the view that, in light of this decision, FTCs for fuel used to power passenger air conditioning units (such as in commercial buses and coaches) whilst travelling on public roads should also be reduced by the RUC.⁸⁵

More generally, the ATO has produced published advice in the form of a tax ruling that addresses the need to distinguish what portion of the fuel used in a heavy vehicle is for travelling (only partly creditable) and what portion is for other purposes (fully creditable). The meaning given to ‘travel’ by the ATO is to go from one place to another and includes the ordinary incidents of a journey.⁸⁶ Fuel used ‘for travelling’ includes not only fuel from propulsion but also fuel used for the other functions that relate to travelling, including fuel used for idling, lights, brakes, power steering and windscreen wipers.⁸⁷ The enquiry therefore turns to whether a particular function of the vehicle is connected with travelling or some other purpose. The ATO provides a number of examples to illustrate this, such as the example of the garbage truck:

The fuel used for the vehicle to travel along the public road is subject to the RUC [so only partly creditable]. The fuel used to operate the bin lift and the compacting mechanism is unrelated to the vehicle’s movement along the public road. Hence the fuel used to operate the bin lift and the compacting mechanism is not subject to the RUC [and is fully creditable].⁸⁸

⁸³ Ibid [38].

⁸⁴ ATO, Decision impact statement: *Linfox Australia Pty Ltd v Commissioner of Taxation of the Commonwealth of Australia*, issued 24 Sep 2019.

⁸⁵ This view is currently expressed only as online web guidance, with effect from 1 November 2019, see ATO, ‘Fuel Tax Credits for Passenger Air Conditioning’ (Web Page, 4 November 2019) <<https://www.ato.gov.au/Tax-professionals/Newsroom/Activity-statements/Fuel-tax-credits-for-passenger-air-conditioning/>>.

⁸⁶ FTR 2008/1 (n 64) paras 14-15.

⁸⁷ Ibid para 23B.

⁸⁸ Ibid para 31.

In light of the 2019 Linfox litigation, this ruling is currently the subject of review but in relation to this issue, the AAT's 2019 decision is generally consistent.

Taxpayers must apportion fuel consumed across these various uses and the Commissioner's view is that taxpayers may choose a basis that is fair and reasonable when determining their entitlements to fuel tax credits.⁸⁹ To assist taxpayers, the ATO has issued two PCGs that provide examples of acceptable bases for such apportionment, in more general cases⁹⁰ and in relation to heavy vehicles with auxiliary equipment (this guideline provides safe harbour percentages for fuel used to run auxiliary equipment but is also the subject of review following the 2019 Linfox decision).⁹¹

V CRITICISMS OF THE FUEL TAX SYSTEM AND THE OPPORTUNITY OF REFORM

There have been repeated and growing calls over the last fifteen years for reform of Australia's road funding system. Australia's Productivity Commission undertook a major review of infrastructure funding in 2014⁹² and its concerns and recommendations regarding road funding were reiterated in 2017.⁹³ Funding pressures are usually identified by way of comparisons of road-related government revenue and road-related government expenditure. In the 2017 report, the Productivity Commission concluded that funding levels were broadly equivalent to expenditure but that revenues were projected to continue to fall in real terms relative to demand and the major weakness was to be found in fuel tax receipts.⁹⁴ The Productivity Commission stated that 'fuel tax receipts have declined and are projected to continue to fall in real terms due to improved fuel efficiency of cars, changes in travel preferences of commuters, the emergence of e-commerce, and the anticipated shift toward electric vehicles, which all reduce

⁸⁹ ATO, FTD 2010/1: 'Fuel tax: apportionment may apply when determining total fuel tax credits in calculating the net fuel amount under section 60-5 of the *Fuel Tax Act 2006*' (2010).

⁹⁰ ATO, PCG 2016/8: 'Fuel tax credits – apportioning fuel for fuel tax credits' (2016).

⁹¹ ATO, PCG 2016/11: 'Fuel tax credits – apportioning taxable fuel used in a heavy vehicle with auxiliary equipment' (2016).

⁹² Productivity Commission, *Public Infrastructure Inquiry Report* (Report, 2014) ('*Public Infrastructure Inquiry Report*').

⁹³ Productivity Commission, *Shifting the Dial: 5 year productivity review* (Report, 2017), ch 4.

⁹⁴ *Ibid* 136.

average fuel consumption.’⁹⁵ Other reports continue to focus on fuel excise as the major source of road funding and its primary risk.⁹⁶

A Traditional Road Funding Sources

The work of the Productivity Commission in comparing road funding and expenditure builds on annual data reported by the Australian Bureau of Infrastructure, Transport and Regional Economics (‘BITRE’). BITRE identifies and then collates road-related expenditure and revenue at the various levels of government. The most recent figures available (for the 2017-18 year) show public sector expenditure on roads at all levels of government totalled \$30,249.4m.⁹⁷ Selected road-related taxes and charges (excluding those items that raise relatively low levels of revenue) were as shown in Table 5 for the same year.

TABLE 5 – SOURCES OF ROAD-RELATED REVENUE, BY GOVERNMENT SECTOR AND TYPE⁹⁸

GOVERNMENT LEVEL	TAX/CHARGE DESCRIPTION	AMOUNT FOR 2017-18 (\$M)
Commonwealth	Net road-related petroleum products excise (net fuel excise)	11,810.2
	Road-related GST	3,973.0
	Road-related Fringe Benefits Tax	984.0
	Federal Interstate Registration Scheme	68.6
	Luxury car tax	705.0
	Passenger motor vehicle customs duty	490.0
State/Territory	Vehicle registration fees	7,645.7
	Driver licence fees	585.0
	Stamp duty	2,917.5
	Tolls	2,418.4
Total		31,597.4

⁹⁵ Productivity Commission, *Shifting the Dial: Supporting Paper No 9* (2017) 4.

⁹⁶ See, eg, Infrastructure Partnerships Australia, *Road Pricing and Transport Infrastructure Funding: Reform Pathways for Australia, Discussion Paper* (2013). Although only a small part of the report, the Harper Competition Policy Review also recommended the reform of road pricing. Australia, *Competition Policy Review* (Final Report, 2015) Rec 3, 38.

⁹⁷ BITRE *Statistics Yearbook 2019* (n 27) Table T.1.2d.

⁹⁸ BITRE, *Infrastructure Statistics Yearbook 2019*, Table T.1.4a. (Total calculated by author).

The data compiled by the BITRE in the *Statistic Yearbook* shows a general decline in real terms in net petrol excise throughout the period from 1997 until 2017 but a slight increase in the most recent 2017-18 year.⁹⁹ This is in contrast to an overall increase over time in State and Territory government vehicle registration fees, driver's licence fees and stamp duty.¹⁰⁰ There is also strong growth in tolls.¹⁰¹ BITRE statistics also show a trend of increasing passenger kilometres travelled, broadly doubling since 1979-80,¹⁰² whilst the fuel excise revenues have declined in real terms.

The comparison of fuel taxes and other 'road related revenue' to road expenditure could lead to the misapprehension that fuel taxes are actually directed to fund roads. The reality is that all government revenues, with the exception of the Federal Interstate Registration Scheme for heavy vehicles (which ceased to operate on 30 June 2019),¹⁰³ at both Commonwealth and State/Territory levels, flow into consolidated revenue and are not hypothecated. The Commonwealth independently determines grants to the States and Territories, which in turn make decisions regarding the spending of those funds on road or other projects and on further grants to local governments.

B *The Development of Alternative User Charge Systems for Roads*

To the extent that roads are generally seen as a public infrastructure, road not unlike other services where access generally can at least theoretically be controlled (electricity, water, telecommunications etc), there is a strong case for a user charging system.¹⁰⁴ The Productivity Commission recommends that (direct) user charges should replace, where possible, other road funding mechanisms and should flow into special purpose Road Funds, thereby achieving earmarking.¹⁰⁵ Infrastructure Australia has joined the call for a user charge system for road use and advocates that it replace fuel tax and vehicle registration charges.¹⁰⁶ There has already been

⁹⁹ Ibid 49, Table T.1.4a.

¹⁰⁰ Ibid.

¹⁰¹ Ibid. Toll revenues have increased, in real terms, from \$231.2m in 1997-98 to \$2418.4m in 2017-18.

¹⁰² Ibid Figure T 3.

¹⁰³ *Interstate Road Transport Legislation (Repeal) Act 2018* (Cth).

¹⁰⁴ *Public Infrastructure Inquiry Report* (n 93) 142.

¹⁰⁵ Ibid 309-10.

¹⁰⁶ *Infrastructure Australia Making Reform Happen: Using incentives to drive a new era of infrastructure reform* (Report, 2018) 18.

recognition that the current heavy vehicle charge system, which is seen as a rough estimate user charge, is not equitable across vehicle operators and a small scale national pilot study to replace it with a system based on vehicle telematics began in July 2019.¹⁰⁷ A larger scale trial that will also include other methods of data collection is due to follow in 2020.¹⁰⁸

A 2019 report by industry think-tank Infrastructure Partnerships Australia calls for state governments to institute road use charge systems for electric passenger cars, noting a ‘terminal’ decline in fuel excise revenue and suggesting a simple distance-based charge as a starting point.¹⁰⁹ Media announcing this report also suggest that Victoria and NSW are currently examining this option.¹¹⁰ As identified by the Productivity Commission, user charge pilots undertaken by other jurisdictions, like the program based on vehicle telemetry data run by the state of Oregon in the United States, can provide very valuable experience for a light vehicle system.¹¹¹

Another concern that has been repeatedly raised is the cost of road congestion.¹¹² It is now also accepted that a reconsideration of road pricing should include an analysis of congestion pricing, perhaps built into the user charge system depending on its technical capabilities.¹¹³ But it is acknowledged that a transition to these measures will take time to develop and implement and there will still likely be a gap between what the Road Funds can support and governments’ needs for the construction and maintenance of roads.

¹⁰⁷ Department of Infrastructure, Transport, Cities and Regional Development, ‘National Heavy Vehicle Charging Pilot’ (Web Page) <<https://www.infrastructure.gov.au/roads/heavy/charging-trials/index.aspx>>.

¹⁰⁸ Ibid.

¹⁰⁹ Infrastructure Partnerships Australia, *Road User Charging for Electric Vehicles* (2019).

¹¹⁰ See, eg, Eryk Bagshaw, ‘Road user charges for electric vehicles “on the radar” as fuel excise revenue falls’ *The Sydney Morning Herald* (online, 20 November 2019) <<https://www.smh.com.au/politics/federal/road-user-charges-for-electric-vehicles-on-the-radar-as-fuel-excise-revenue-falls-20191120-p53cdj.html>>.

¹¹¹ Information on Oregon’s road usage charge system, ‘OReGO’, is available here: <<https://www.myorego.org/>>. See also Oregon Department of Transportation, *Oregon’s Road Usage charge: OReGO Program, Final Report* (2017).

¹¹² See KPMG, *Unblocking traffic congestion: A map to Australian road pricing schemes* (Report, 2016).

¹¹³ See Grattan Institute, *Stuck in traffic? Road congestion in Sydney and Melbourne* (Report, 2017); *NSW Review of Federal Financial Relations* (n 13) 89-92.

C *An Environmental Tax Policy*

In light of the issues raised in relation to fuel excise, the question for fuel tax could be reframed: given that consolidated revenue will continue to be the source of at least some road funding into the future, could a reformed fuel tax provide a fairer and more efficient mechanism to raise revenue? Given that fuel is already subject to the GST, the policy rationale supporting the additional taxation of this product should be reconsidered, especially given the concern that consumption taxes in general and fuel taxes in particular may be regressive.¹¹⁴ As governments rely more on broad-based income and consumption taxes to fund expenditure, excise is now rarely used and is largely seen as a ‘sin tax’ applying to alcohol and tobacco products for the dual policy objectives of raising revenue whilst pursuing public health outcomes.¹¹⁵ An obvious economic argument for targeting transport fuels is due to the environmental costs associated with their use, this being the traditional economic basis for environmental taxation in the tradition of Pigou and Coase.¹¹⁶ Recognition of this justification for specially taxing transport fuels has received some support in Australia. In the report of the Future Tax System Review (the ‘Henry Review’), the following was recommended:

The only additional taxes to those on the four broad bases described earlier [personal income, business income, rents on natural resources and rents, and private consumption] would be specific taxes imposed for one of three purposes: to improve market or social outcomes by addressing spillover costs and benefits; to help counteract self-control problems (in the special case of tobacco); and to improve market efficiency through appropriate price signals.¹¹⁷

¹¹⁴ Sterner finds some evidence of regressivity in a study of 7 European countries but concludes that the evidence is very weak. Thomas Sterner, ‘Distributional effects of taxing transport fuel’ (2012) 41 *Energy Policy* 75. See also Katri Kosonen, ‘Regressivity of environmental taxation: myth or reality’ in Janet E Milne and Mikael S Andersen (eds), *Handbook of Research on Environmental Taxation* (Edward Elgar, 2014). The NSW sees evidence that the fuel excise is regressive on the basis that persons on lower incomes tend to have older, less fuel-efficient cars and often have longer commutes. *NSW Review of Federal Fiscal Relations* (n 13) 83.

¹¹⁵ For a discussion of these issues see, eg, Richard Bird, ‘Tobacco and Alcohol Excise Taxes for Improving Public Health and Revenue Outcomes: Marrying Sin and Virtue?’ World Bank Group, Policy Research Working Paper 7500 (2015).

¹¹⁶ A C Pigou, *The Economics of Welfare* (Macmillan, 1920) and R H Coase, ‘The Problem of Social Cost’, (1960) 3 *Journal of Law and Economics* 1. The literature building on this work in the field of environmental taxation is too numerous to site but for an excellent collection of writings related to this topic see Janet E Milne and Mikael S Andersen (eds), *Handbook of Research on Environmental Taxation* (Edward Elgar, 2014).

¹¹⁷ Australia, *Australia’s Future Tax System* (Final Report, 2010) Part I at 53.

The Henry Review took the view that revenue from fuel taxes should be replaced over time with revenue from more efficient broad-based taxes¹¹⁸ but if fuel taxes were retained they ‘should not exceed the levels justified by broadly defined social costs of use (whether of roads or environmental costs)’.¹¹⁹ The crudeness of fuel tax as a user charge is obvious once it is recognised that electric vehicles get a ‘free ride’,¹²⁰ so the remaining justification of environmental cost should dictate the reform agenda.

Consistent with these recommendations, the policy justification for a fuel tax should be to reflect the climate externality associated with fuel use. Viewed from this perspective, the fuel tax could be reformed to remove much of its current complexity, resulting in significant savings in administration and compliance costs. The fuel excise could continue to apply to all road transport fuels but the rate of tax would be based on the estimated cost of the externality, so that diesel would be taxed at a higher rate to petrol, which could be revisited on a regular basis. Based on the OECD’s work on energy taxes, this would likely lead to a reduction in the rate. By severing the (imagined) link to funding public roads, there would no longer be a need for the FTC system — the differentiation of fuel usage between travel and other purposes would no longer be necessary. This would have the effect of broadening the base of the tax to all users of transport fuels. It should also be possible to model the fuel tax in a way that recognises its potentially regressive impact and seeks to minimise it.

VI CONCLUSION

The history of fuel excise and the hypothecation of this revenue to road funding until the late 1950s explain the design of the excise and credit system as an indirect road user charge system. In addition to the obvious crudeness of equating fuel use to road use, many reviews and reports have highlighted the weakness of transport fuels as a tax base, given the increasing fuel efficiency of vehicles and the predicted significant growth in electric vehicles. This article provides another basis for criticism of the current system — the significant complexity in determining the availability of the fuel tax credit. The system is so complex that the ATO estimates that taxpayers under-claim credits otherwise available, a negative tax gap.

¹¹⁸ Ibid Recommendation 65.

¹¹⁹ Ibid 53.

¹²⁰ *NSW Review of Federal Fiscal Relations* (n 13) 83.

The development of direct user charging for roads would allow the Australian Government to reformulate the fuel tax system to disconnect it from road use so that instead it can operate as an environmentally motivated mechanism and continuing to target transport fuels for this additional tax could be justified economically. Ultimately, both goals of generating government revenue and protecting the environment could be better served.