

CARBON ASSESSMENT OF THE 2018-19 DRAFT BUDGET



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Foreword



Sustainability remains central to the Scottish Government's Purpose, of focussing government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. We are proud of and committed to delivering our ambitious climate change targets, through our transition to a low-carbon economy. We will set out the measures, policies and proposals that will allow us to meet our annual targets, out to 2032, our interim target of a 42% reduction in greenhouse gas emissions by 2020 and set us on track for an 80% reduction by 2050, in the final Climate Change Plan, to be published in February 2018.

We demonstrate our commitment to achieving our climate change goals in this Carbon Assessment, where we consider the emissions impacts associated with Scottish Government spend, as set out in the Draft Budget. This Assessment ensures that climate considerations remain central to our spending decisions. The Carbon Assessment should be read alongside the forthcoming Climate Change Plan, which will provide further detail on how Scottish Government policy will set us on a long-term carbon reduction path.

A handwritten signature in black ink, appearing to read 'D Mackay', written in a cursive style.

Derek Mackay, MSP

Cabinet Secretary for Finance and the Constitution

1. Introduction

1. This assessment is based on the expenditure data presented in the 2018-19 Draft Budget and fulfils the statutory requirement under Section 94 of the Climate Change (Scotland) Act 2009 to report upon the emissions impact of expenditure proposals.

1.1. Scope of Assessment

2. The assessment of the Draft Budget captures solely the emissions associated with Scottish Government's purchase of goods and services. It is a consumption-based measure that covers direct emissions (including emissions from space heaters in Government buildings) and indirect emissions (supply side impacts, such as the production of gravel for roads constructed by the Government or generation of electricity, which is then used by Government). It also includes any imported emissions that are generated in producing the direct and indirect goods and services that Government purchases.
3. The methodology for the Carbon Assessment of the Draft Budget is high level in nature, and thus best applied to portfolio spending and budget expenditure as a whole. This assessment allows the Scottish Government to place the carbon impact of its use of goods and services within the wider context of the national and global economy. It helps raise awareness of the carbon impact of spend in different areas, by identifying direct emissions and those from supply-side inputs.
4. The assessment does not, however, take account of 'second-round' emissions; while we do include emission impacts associated with Government spend and its supply chain, we do not count the emissions or savings associated with all of the outcomes arising from Government spending. For example, while the emissions associated with manufacturing and installing insulation are included, we do not count the carbon that may be saved in future as a result of making that improvement to the housing stock.¹
5. In order to better understand the complete picture on emissions associated with Government spend on goods and services, this assessment needs to be read alongside the Climate Change Plan, to be published in February 2018, which sets out measures out to 2032, for meeting the 2050, interim and annual targets in the Climate Change (Scotland) Act.
6. Although the methodology underpinning the Carbon Assessment of the Draft Budget remains the same as for the Carbon Assessment of the 2017-18 Draft Budget, the base year of Environmental Input-Output (EIO) model itself has been updated from 2010 to 2013. This is possible because of the newly available input-output analytical tables covering the year 2013 for the UK. As

¹ For the reasons behind the adoption of this approach please see Section 1.5 of the 2010-11 assessment (<http://www.gov.scot/Publications/2009/09/17102339/0>).

usual the model has also been updated to use the latest available Greenhouse Gas emissions ratios and HM Treasury deflators. More information about these changes and their effects on the overall GHG estimates can be found in Annex A.

1.2. Key Results

7. Following the approach set out in section 1.1, it is estimated that total emissions attributed to the Draft 2018-19 Budget amount to 7.4 million tonnes (Mt) CO₂-equivalent. Applying the updated model to the 2017-18 Draft Budget shows an emissions total of 7.1 MtCO₂-equivalent.
8. Details on the various sources of emissions show that some 36 per cent of the Scottish Government's carbon footprint is caused by the use of energy, water and waste, followed by manufacturing (21 per cent) and transport and communication (14 per cent).

1.3. Budget Context

9. The Draft Budget for 2018-19 contains details of Total Managed Expenditure (TME) of £40.6 billion across portfolio areas. Expenditure is split between resources and capital expenditure, and Annually Managed Expenditure (AME). This is illustrated in Table 1. Total Managed Expenditure was £38 billion across portfolio areas in the 2017-18 Draft Budget.

Table 1: Total proposed spending plans for 2018-19

	Resource	Capital	Total	UK Funded AME	Total
	£m	£m	£m	£m	£m
2018-19 Draft Budget					
Health and Sport	13,147.8	351.2	13,499.0	100.0	13,599.0
Finance and the Constitution	164.9	6.7	171.6	4,624.0	4,795.6
Education and Skills	2,813.6	171.0	2,984.6	428.0	3,412.6
Justice	2,540.1	112.8	2,652.9	-	2,652.9
Economy, Jobs and Fair Work	266.0	423.8	689.8	-	689.8
Communities, Social Security and Equalities	7,146.3	1,733.4	8,879.7	2,636.0	11,515.7
Environment, Climate Change and Land Reform	165.0	239.9	404.9	-	404.9
Rural Economy and Connectivity	1,447.0	1,359.4	2,806.4	-	2,806.4
Culture, Tourism and External Affairs	314.6	29.7	344.3	-	344.3
Administration	179.5	13.1	192.6	-	192.6
Crown Office and Procurator Fiscal Service	112.4	3.6	116.0	-	116.0
Scottish Government	28,297.2	4,444.6	32,741.8	7,788.0	40,529.8
Scottish Parliament and Audit Scotland	106.1	1.5	107.6	2.0	109.6
Total Scotland	28,403.3	4,446.1	32,849.4	7,790.0	40,639.4

Summary

It is estimated that total emissions resulting from the 2018-19 Draft Budget will be 7.4 Mt CO₂-equivalent.

Emissions remain broadly proportional to spend, except for Rural Economy and Connectivity, where emissions per unit of spend are slightly higher.

'Second-round' emissions that may result from Government spending and the *use* of public goods and services, whether beneficial in terms of reducing emissions (e.g. spending on energy efficiency or afforestation) or negative in terms of increasing emissions (e.g. road use) are not captured.

Alongside this analysis of the carbon impact of the Draft Budget, the Scottish Government will continue to use additional assessment methods to improve understanding of the emission impacts of both Government expenditure and policies. The final Climate Change Plan, setting out measures to 2032 for achieving our climate change targets, will be published in February 2018.

2. High-level Carbon Assessment of 2018-19 Draft Budget

2.1. Portfolio Expenditure and Associated Emissions

10. Total estimated emissions attributable to the 2018-19 Draft Budget are 7.4 Mt CO₂-equivalent. Table 2 shows overall spend and emissions by the individual portfolios and further, how these emissions arise. Emissions remain broadly proportional to spend, except for Rural Economy and Connectivity, where emissions per unit of spend are slightly higher. Communities, Social Security and Equalities, Health and Sport, and Rural Economy and Connectivity are the largest Draft Budget items, with the highest emissions.

11. Expenditure is shown net of income, in line with the Draft Budget, and emissions are calculated on that basis.²

Table 2: Portfolio expenditure³ (TME excluding non-cash items) and emissions

Portfolio	Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			Total
		Domestic		Imported	
		Direct	Indirect		
Health and Sport	£13,226	373.3	558.3	1,032.9	1,964.5
Finance and the Constitution	£4,794	7.7	190.9	476.3	674.9
Education and Skills	£3,262	84.3	101.8	288.4	474.5
Justice	£2,513	96.2	116.6	223.3	436.1
Economy, Jobs and Fair Work	£680	20.0	28.5	91.7	140.1
Communities, Social Security and Equalities	£11,515	741.6	483.5	1,244.5	2,469.6
Environment, Climate Change and Land Reform	£382	9.8	13.6	70.7	94.1
Rural Economy and Connectivity	£2,509	402.4	121.2	487.4	1,011.0
Culture, Tourism and External Affairs	£327	7.6	19.3	25.5	52.3
Administration	£178	7.1	8.5	16.6	32.2
Crown Office and Procurator Fiscal Service	£112	4.6	5.4	10.2	20.2
Scottish Parliament and Audit Scotland	£97	3.8	4.5	8.4	16.7
Total	£39,594	1,758.4	1,652.2	3,975.8	7,386.3

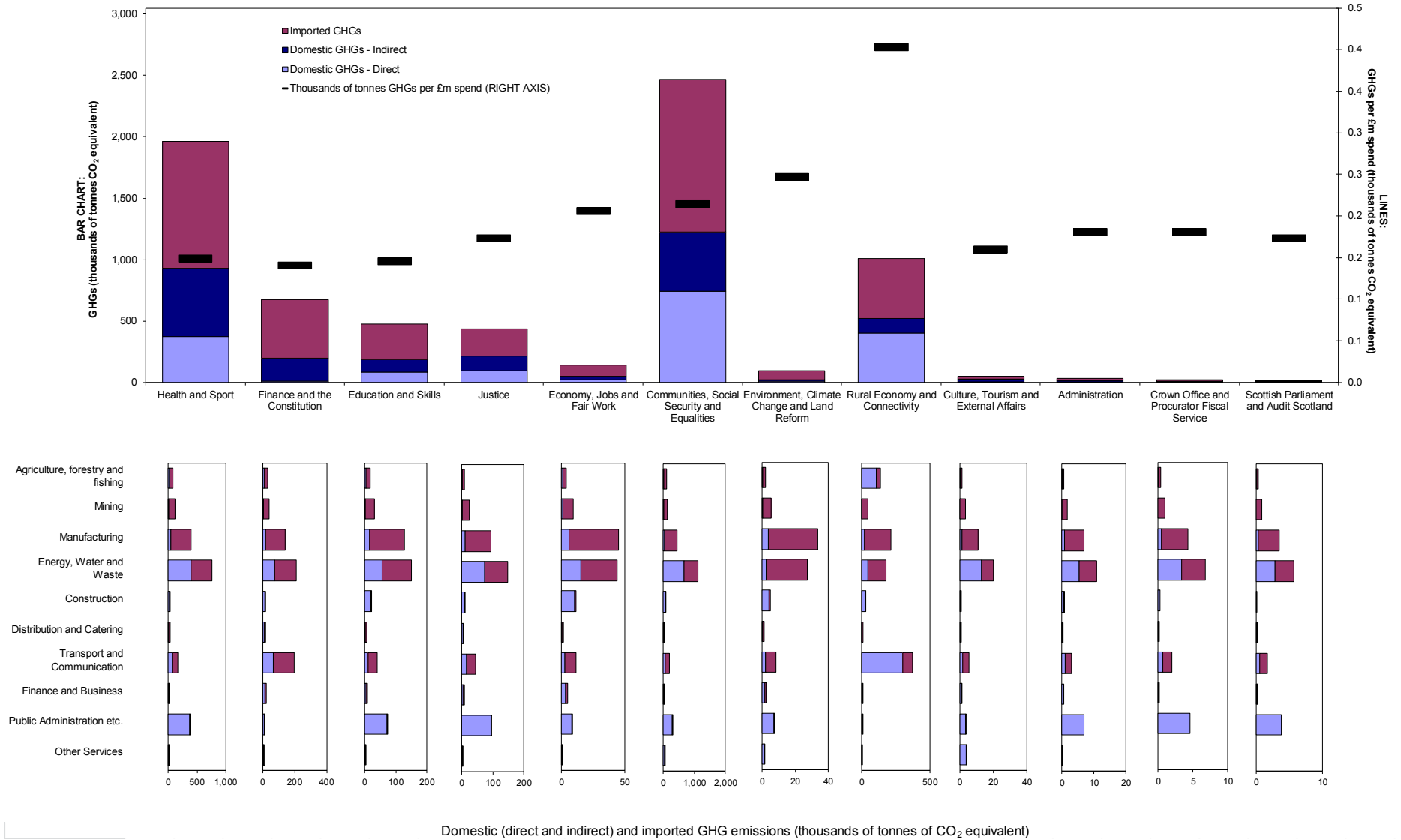
12. Direct emissions account for 24 per cent of the total; indirect emissions for a further 22 per cent – a large proportion of which is caused by electricity generation. 54 per cent of emissions attributable to Draft Budget expenditure are generated outside Scotland and are embedded in imported goods and services.

13. Figure 1 demonstrates graphically the results for individual portfolios and the split by type of emissions (direct/indirect), and also whether the emissions are domestic or imported. As the graph highlights, the emissions intensity (carbon emissions per pound of spend) of individual portfolios are broadly similar. The exception is Rural Economy and Connectivity, where the emissions intensity of spend is higher. A large part of this expenditure is linked to carbon-intensive production methods (carbon sequestration through forestry is not taken into account). Note that in the second part of Figure 1, the scales vary by portfolio.

² See Annex B for a fuller discussion of this issue.

³ Non-cash items are excluded from the assessment where they do not lead to extra demand for goods and services. Because these items are excluded, the Draft Budget total shown here is lower than that in the Draft Budget itself, and lower than in Table 1.

Figure 1: Estimated domestic and imported GHG emissions (thousands of tonnes of CO₂ equivalent) by portfolio and generating industry.
Scottish Government Draft Budget 2018/19

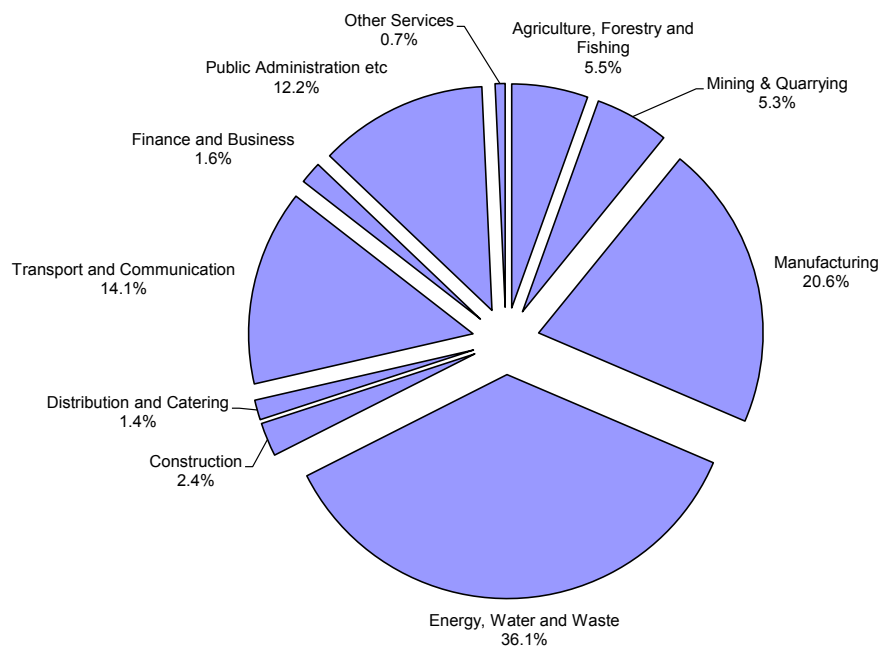


2.2. Emissions by Industry Source

14. Figure 1 confirms the continued importance of domestic energy production and its emissions across the Scottish Budget. In addition to this, for Rural Economy and Connectivity, the support of farming activity leads to significant levels of methane and nitrous oxide emissions.⁴

15. Total emissions broken down by industry are shown in Figure 2. Some 36 per cent of the Scottish Government's carbon footprint is caused by the use of energy, water and waste, followed by manufacturing (21 per cent) and transport and communication (14 per cent).

Figure 2: Overall Government spending - Industry sector share of emissions (domestic direct and indirect, plus imported GHG emissions)



16. To reduce the emissions from Government spending, decarbonisation of the energy sector remains an important policy aim. As the sector is decarbonised, the carbon intensity of the sector in the Environment Input-Output model will fall, with a consequential reduction in carbon emissions recorded in the use of electricity⁵.

⁴ This methodology excludes impacts upon carbon dioxide from affecting soils – e.g. ploughing, planting, woodland sequestration. The carbon footprint for the Rural Affairs, Food & Environment portfolio does not include the emissions relating to spending financed by EU funds because the Draft Budget only shows net expenditure i.e. expenditure that is not funded through sources of income like EU funds.

⁵ This assessment does not take into account the impact of the EU Emissions Trading Scheme (EU ETS).

2.3. Domestic and Imported Emissions

17. In addition to direct and indirect domestic emissions, the assessment takes into account the emissions generated outside of Scotland in the production of imported goods purchased as a result of Government spending (e.g. food, machinery, IT equipment).
18. Figure 3 demonstrates that imported emissions make up around a half of emissions from Draft Budget spend. There is however a clear difference between the sources of domestic and imported emissions. Expenditure on energy, water and waste accounts for the largest share of domestic emissions, while expenditure on manufacturing generates the largest share of imported emissions.

Figure 3: Domestic and Imported Emissions - All portfolios

Figure 3a: Domestic emissions by industrial sector

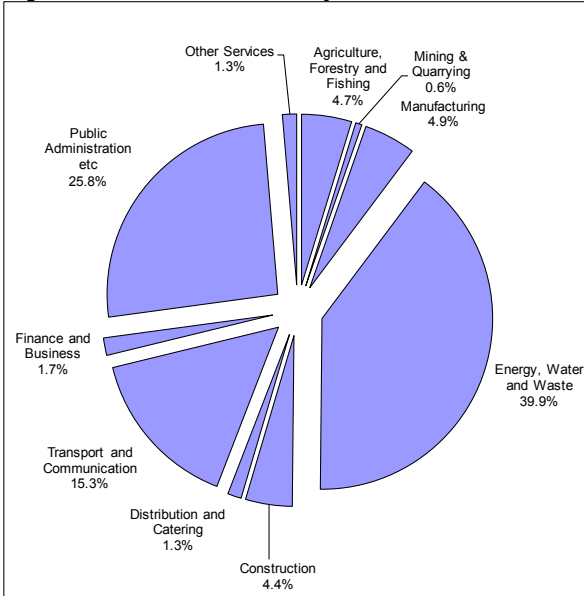


Figure 3b: Imported emissions by industrial sector

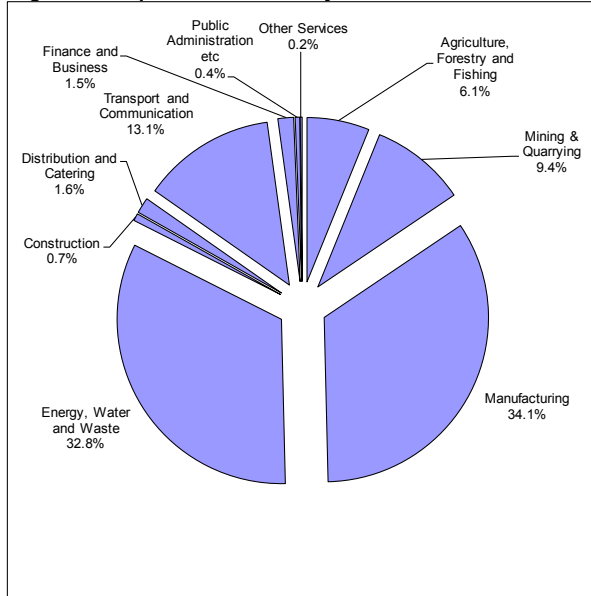


Figure 3c: Domestic and imported emissions, thousands of tonnes of CO₂ equivalent and percent

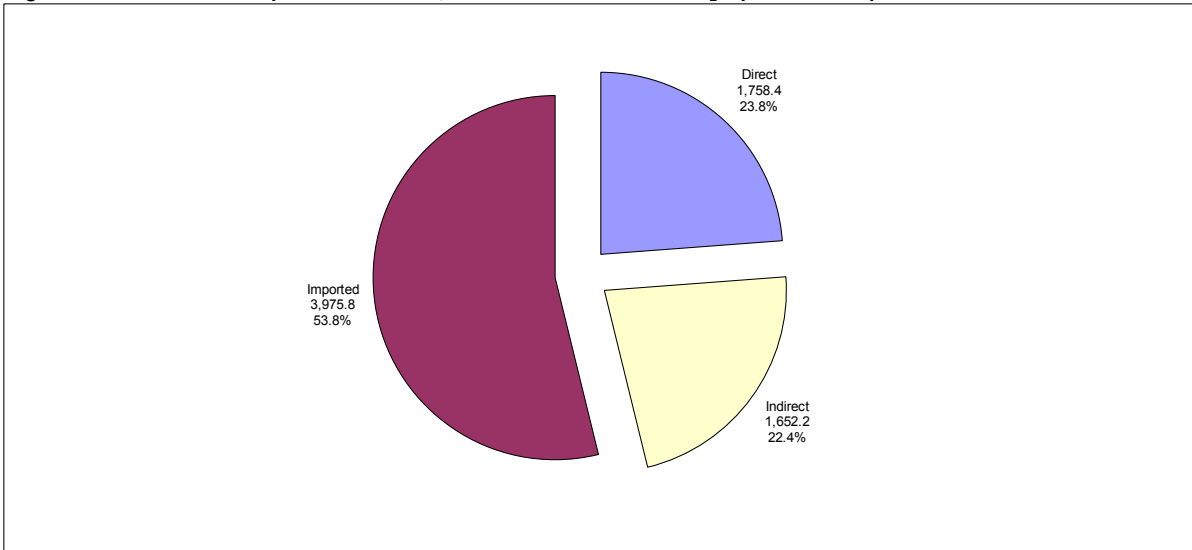
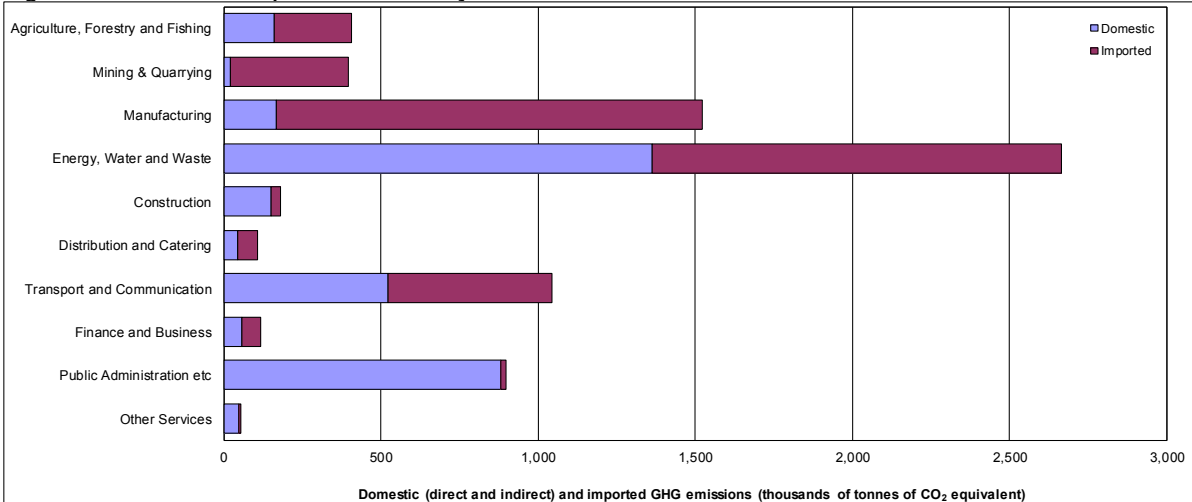


Figure 3d: Domestic and imported emissions by industrial sector



Annex A – Methodology

1. The figures presented in this report are estimated using the Scottish Government Environmental Input-Output Model (EIO) 2010.
2. The EIO is constructed using the Scottish Government Input-Output Tables 2013 (taken from the 1998-2014 Tables published in July 2017), UK Blue Book 2016 consistent Input-Output Tables 2013 and UK Analytical Tables 2013, UK Environmental Accounts 2013 (July 2017) and HM Treasury GDP Deflators, November 2017.
3. A fuller description of the model and its associated Greenhouse Gas effects estimates that this assessment is based upon can be found at: <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output/CarbonAssessment>.

Revisions to the Environmental Input-Output Model

4. With the release of new input-output analytical tables covering the year 2013 for the UK, this year the base year of the EIO model has been updated from 2010 to 2013. This has involved a number of additional changes to the model:
 - The updating of the underlying Scottish Input-Output model and UK closed economy input-output model from the 2010 version to the latest published version for 2013
 - The updating of the year used to calculate emissions factors from 2010 to 2013alongside the regular annual updates of:
 - Updating the emissions data from ONS environmental accounts to the latest published version
 - Updating the forecast GDP deflator used to project estimates to the budget year to the latest version published by HMT.
5. These changes have led to a large downward revision to estimated greenhouse gas emissions arising from the 2017/18 budget of around 20%
6. Of this change, approximately 70% of the total revision arises from the change in the GHG emissions factors between 2010 (the year for which the old model was constructed) and 2013 (the year for which the new model was constructed). This reflects the parts of the Scottish and UK economy directly or indirectly supported by Scottish Government spending becoming less GHG intensive over time.
7. However, care should be taken when interpreting the revision to imported GHGs. Given the lack of a world economy model and emissions factors, the EIO model uses the UK economy as a proxy for the world economy. Changes in emissions intensities in the UK economy may not be representative of changes in the world economy, for example due to different technologies being used, or if more carbon intensive activities move overseas and are replaced by imports.

8. The remaining 30% of the revision is mainly accounted for by other changes in the underlying input-output tables between the old 2010 versions and the 2013 versions used in the new model. These changes include the adoption of ESA2010 accounting standards for the tables (in particular, the capitalisation of R&D and other activities which were counted as intermediate consumption under ESA1995), as well as underlying changes in the economy between 2010 and 2013.
9. One further impact of methodological change between the old and new models is that some Scottish emissions which were previously counted as indirect emissions are now counted as direct emissions due to a change in the accounting treatment of social transfers in kind market production⁶.

⁶ For details, see [Methodological improvements to National Accounts for Blue Book 2016: Market/non-market output \(P.131/P.132\) and social transfers in kind \(D.631/D.632\) for government](#), ONS

Annex B - Detailed Tables

1. The tables below show the detail of the Carbon Assessment down to Level 3 spending lines, including some income lines (such as EU income). Since the Draft Budget is calculated in terms of net expenditure, the carbon assessment of the Draft Budget has been calculated on the same basis. For some portfolios, the Level 3 spending lines already have income netted out whereas others show gross expenditure. Where figures are not already expressed as net it is necessary to show a negative carbon number against the income lines. At Level 2 and at portfolio level, the income is fully netted off and there are no discrepancies between portfolios, making spending lines directly comparable.
2. Some non-cash items are not considered for the purposes of this analysis. Because these items are excluded, the Draft Budget total shown here is lower than that in the Draft Budget itself.
3. The Scottish Budget also creates private incomes (both in the public sector and in the private industries whose goods and services are demanded by Government). The Scottish Budget thus *induces* demand and further economic output, which generates carbon emissions. There are arguments for including or excluding this expenditure from the calculation and our calculation excludes emissions from induced demand.

Note: Spend lines are shown in £m and exclude non-cash items
Emissions are shown in thousands of tonnes of CO₂-equivalent
0.0 denotes less than £0.05m or 0.05 thousand tonnes

Health and Sport		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			Total
			Domestic			
			Direct	Indirect	Imported	
Food Standards Scotland	Food Standards Scotland Administration	£8.6	0.4	0.4	0.8	1.5
	Food Standards Scotland Programme	£9.7	0.4	0.5	0.9	1.7
	Food Standards Scotland Retained Income	-£3.2	-0.1	-0.2	-0.3	-0.6
	Subtotal	£15.1	0.6	0.7	1.3	2.7
Health	Active Healthy Lives	£12.7	1.0	0.7	1.8	3.5
	Capital Income	-£20.0	-0.5	-0.8	-3.7	-5.0
	Capital Investment	£361.2	8.2	14.3	65.2	87.7
	Care Support and Rights	£111.9	3.2	4.8	8.4	16.4
	Early Years	£67.7	1.9	2.9	5.1	9.9
	General Dental Services	£414.8	11.7	17.6	31.2	60.6
	General Medical Services	£870.5	24.6	37.0	65.6	127.2
	General Ophthalmic Services	£107.4	3.0	4.6	8.1	15.7
	Health Financial Transactions	£10.0	0.2	0.4	1.8	2.5
	Health Improvement and Protection	£62.7	1.8	2.7	4.7	9.2
	Mental Health Services	£70.2	2.0	3.0	5.3	10.3
	Miscellaneous Other Services and Resource Income	-£133.6	-3.8	-5.7	-10.1	-19.5
	NHS Special Boards	£1,149.3	32.5	48.9	86.6	167.9
	NHS Territorial Boards	£9,430.6	266.7	401.0	710.3	1,378.0
	Outcomes Framework	£66.2	1.9	2.8	5.0	9.7
	Performance & Delivery	£69.9	2.0	3.0	5.3	10.2
	Pharmaceutical Services					
	Contractors Remuneration	£184.8	5.2	7.9	13.9	27.0
	Quality & Improvement	£13.2	0.4	0.6	1.0	1.9
	Revenue Consequences of NPD Schemes	£44.7	1.3	1.9	3.4	6.5
	SportScotland	£30.7	2.4	1.6	4.4	8.4
	Workforce & Nursing	£193.1	4.5	4.6	11.2	20.3
	eHealth	£92.9	2.6	3.9	7.0	13.6
	Subtotal	£13,210.6	372.7	557.6	1,031.5	1,961.8
Total		£13,225.7	373.3	558.3	1,032.9	1,964.5

Finance and the Constitution		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			Total
			Domestic			
			Direct	Indirect	Imported	
Finance & Constitution	Capital Borrowing Requirement	£31.0	0.0	1.2	2.6	3.8
	Local Government Boundary Commission	£0.4	0.0	0.0	0.0	0.1
	Local Government Elections	£0.4	0.0	0.0	0.0	0.1
	Procurement Shared Services	£16.8	0.7	0.8	1.5	3.0
	Public Information and Engagement	£2.8	0.1	0.1	0.3	0.5
	Royal and Ceremonial	£0.6	0.0	0.0	0.1	0.1
	Scotland Act 2016 Non-Tax Implementation	£75.0	3.1	3.6	6.7	13.4
	Scotland Acts - Tax Implementation & Management	£8.6	0.4	0.4	0.8	1.5
	Scottish Futures Trust	£4.5	0.1	0.1	0.4	0.5
	Scottish Parliamentary Elections	£0.2	0.0	0.0	0.0	0.0
	Subtotal	£140.3	4.4	6.3	12.3	23.1
NHS Pensions	NHS Superannuation Scheme (Scotland)	£3,041.6	1.4	120.5	303.2	425.1
	Subtotal	£3,041.6	1.4	120.5	303.2	425.1
Revenue Scotland	Revenue Scotland	£10.2	0.4	0.5	1.2	2.0
	Subtotal	£10.2	0.4	0.5	1.2	2.0
Scottish Fiscal Commission	Scottish Fiscal Commission	£1.6	0.1	0.1	0.1	0.3
	Subtotal	£1.6	0.1	0.1	0.1	0.3
Scottish Public Pensions Agency	Agency Administration	£15.7	0.6	0.8	1.4	2.8
	IT Provision	£2.4	0.1	0.1	0.4	0.5
	Subtotal	£18.1	0.7	0.9	1.8	3.3
Teachers' Pensions	Scottish Teachers Superannuation Scheme	£1,582.4	0.7	62.7	157.7	221.1
	Subtotal	£1,582.4	0.7	62.7	157.7	221.1
Total		£4,794.2	7.7	190.9	476.3	674.9

Education and Skills		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)				
			Domestic			Total	
			Direct	Indirect	Imported		
Advanced Learning & Science	Higher Education	£1.5	0.1	0.1	0.1	0.2	
	Qualification & Accreditation	£1.7	0.1	0.1	0.1	0.3	
	Science Engagement and Advice	£3.0	0.1	0.1	0.3	0.5	
	Subtotal	£6.2	0.2	0.3	0.5	1.1	
Children & Families	Care & Justice	£36.4	1.4	1.6	3.8	6.8	
	Care & Protection	£14.1	0.4	0.5	1.9	2.8	
	Creating Positive Futures	£64.9	1.5	1.6	3.8	6.8	
	Disclosure Scotland	£11.7	0.4	0.6	1.3	2.3	
	Office of the Chief Social Work Adviser	£19.2	0.8	0.9	1.7	3.4	
	Subtotal	£146.2	4.5	5.2	12.4	22.1	
Higher Education Student Support	Capitalised Interest	£65.0	0.0	-2.5	-5.5	-8.0	
	Net Student Loans Advanced	£550.0	12.9	22.7	96.6	132.1	
	SAAS Capital	£1.6	0.0	0.1	0.2	0.3	
	Student Awards Agency for Scotland Operating Costs	£11.0	0.5	0.5	1.0	2.0	
	Student Loan Interest Subsidy to Bank	£2.0	0.0	0.1	0.2	0.2	
	Student Loans Company Administration Costs	£4.2	0.0	0.2	0.4	0.5	
	Student Loans Fair Value Adjustment	£28.0	0.0	1.1	2.4	3.4	
	Student Support and Tuition Fee Payments	£301.6	12.5	14.6	26.8	53.9	
	Subtotal	£833.4	25.9	36.7	122.0	184.6	
	Learning	Education Analytical Services	£2.2	0.1	0.1	0.2	0.4
		Education Scotland Gaelic	£20.0	0.8	1.0	1.8	3.6
		£23.2	0.5	1.4	1.6	3.5	
		Learning & Support	£34.6	1.4	1.7	3.2	6.2
People & Infrastructure		£81.2	1.9	2.0	4.7	8.6	
Strategy & Performance		£74.8	1.7	1.8	4.4	7.9	
Subtotal		£236.1	6.5	7.9	15.8	30.2	
Scottish Funding Council	College Capital Expenditure	£78.7	1.5	2.6	14.2	18.3	
	College Capital Receipts	£2.0	0.0	-0.1	-0.4	-0.5	
	College NPD Expenditure	£29.3	0.7	0.7	1.7	3.1	
	College Operational Expenditure	£778.2	18.0	18.7	45.2	82.0	
	College Operational Income	£190.0	-4.4	-4.6	-11.0	-20.0	
	Higher Education Capital	£41.2	0.8	1.4	7.4	9.6	
	Higher Education Financial Transactions	£40.0	1.0	1.8	5.9	8.7	
	Higher Education Resource	£1,024.9	23.7	24.7	59.6	107.9	
	SFC Admin	£7.2	0.3	0.4	0.6	1.3	
	Subtotal	£1,807.6	41.4	45.6	123.3	210.3	
Skills & Training	Employment and Training Interventions	£39.5	1.4	1.6	3.1	6.0	
	Skills Development Scotland (SDS)	£192.8	4.5	4.6	11.2	20.3	
	Subtotal	£232.3	5.8	6.2	14.3	26.3	
Total	£3,261.8	84.3	101.8	288.4	474.5		

Justice	Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)				Total
		Domestic			Imported	
		Direct	Indirect			
Community Justice Services	Community Justice Services					
	Miscellaneous	£3.2	0.1	0.2	0.3	0.6
	Offender Services	£32.2	1.3	1.6	2.9	5.8
	Subtotal	£35.4	1.5	1.7	3.2	6.3
Criminal Injuries Compensation	CIC Scheme	£14.8	0.6	0.7	1.3	2.6
	Criminal Injuries	£2.7	0.1	0.1	0.2	0.5
	Subtotal	£17.5	0.7	0.8	1.6	3.1
Judicial Salaries and Election Expenses	Judicial Salaries	£33.0	0.2	0.7	1.6	2.5
	Subtotal	£33.0	0.2	0.7	1.6	2.5
Judiciary	Judiciary	£1.0	0.0	0.0	0.1	0.2
	Subtotal	£1.0	0.0	0.0	0.1	0.2
Legal Aid	Legal Aid Administration	£10.8	0.1	0.2	0.5	0.8
	Legal Aid Fund	£126.1	0.9	2.8	6.1	9.7
	Subtotal	£136.9	0.9	3.0	6.6	10.5
Miscellaneous	Other Miscellaneous	£17.3	0.6	0.8	1.8	3.2
	Scottish Resilience	£8.3	0.3	0.4	0.7	1.5
	Victim/Witness Support	£17.9	0.7	0.9	1.7	3.3
	Subtotal	£43.4	1.6	2.1	4.2	7.9
Police & Fire Pensions	Fire Pensions	£72.2	3.0	3.5	6.4	12.9
	Police Pensions	£278.4	11.5	13.5	24.8	49.7
	Subtotal	£350.6	14.5	16.9	31.2	62.6
Police Central Government	National Police Funding and Police Change	£90.2	3.5	4.3	8.7	16.6
	Police Support Services	£-2.1	-0.1	-0.1	-0.2	-0.4
	Subtotal	£88.1	3.4	4.2	8.5	16.2
Safer & Stronger Communities	Safer Communities	£5.7	0.2	0.3	0.5	1.0
	Subtotal	£5.7	0.2	0.3	0.5	1.0
Scottish Courts & Tribunals Service	Scottish Courts & Tribunal Service Capital Spending	£22.9	0.6	1.0	3.4	5.0
	Scottish Courts & Tribunal Service Operating Expenditure	£75.2	3.1	3.6	6.7	13.4
	Subtotal	£98.1	3.7	4.7	10.1	18.4
Scottish Fire and Rescue Service	Scottish Fire and Rescue Service	£296.9	11.7	14.3	28.3	54.3
	Subtotal	£296.9	11.7	14.3	28.3	54.3
Scottish Police Authority	Scottish Police Authority	£1,087.8	44.6	52.5	98.1	195.3
	Subtotal	£1,087.8	44.6	52.5	98.1	195.3
Scottish Prison Service	Scottish Prison Service Capital Spending	£16.2	0.4	0.7	2.4	3.5
	Scottish Prison Service Operating Expenditure	£302.9	12.5	14.6	26.9	54.1
	Subtotal	£319.0	12.9	15.4	29.3	57.6
Total		£2,513.4	96.2	116.6	223.3	436.1

Economy, Jobs and Fair Work		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)				
			Domestic			Imported	Total
			Direct	Indirect			
Accountant in Bankruptcy	AiB Capital Expenditure	£1.0	0.0	0.0	0.1	0.2	
	AiB Less Retained Income	-£10.2	-0.4	-0.5	-0.9	-1.8	
	AiB Operational Costs	£11.3	0.5	0.5	1.0	2.0	
	Subtotal	£2.2	0.1	0.1	0.3	0.4	
Employability and Training	Employability and Training	£52.9	1.2	1.3	3.2	5.7	
	Subtotal	£52.9	1.2	1.3	3.2	5.7	
Enterprise and Energy	Energy	£93.6	2.8	3.0	19.6	25.4	
	Enterprise	£291.0	10.2	13.5	33.4	57.1	
	Innovation & Industries	£115.7	2.6	4.9	17.0	24.5	
	Subtotal	£500.3	15.5	21.4	70.0	107.0	
Parliamentary Business & Government Strategy	Cities Investment & Strategy	£122.2	3.1	5.6	17.9	26.6	
	Citizens Advice Direct	£0.6	0.0	0.0	0.1	0.1	
	Council of Economic Advisers	£0.1	0.0	0.0	0.0	0.0	
	Office of the Chief Economic Adviser	£1.0	0.0	0.0	0.1	0.2	
	Strategic Research and Analysis Fund	£0.8	0.0	0.0	0.1	0.1	
	Subtotal	£124.6	3.2	5.7	18.2	27.0	
Total		£680.0	20.0	28.5	91.7	140.1	

Communities, Social Security and Equalities		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)				
			Domestic			Imported	Total
			Direct	Indirect			
Equalities	Equalities	£22.7	0.4	0.5	1.1	2.0	
	Subtotal	£22.7	0.4	0.5	1.1	2.0	
Governance Elections and Reform	Local Governance	£0.5	0.0	0.0	0.0	0.1	
	Public Services Reform and Community Empowerment	£0.8	0.0	0.0	0.1	0.1	
	Subtotal	£1.3	0.1	0.1	0.1	0.2	
Housing	Communities Analysis	£3.6	0.0	0.1	0.3	0.4	
	Fuel Poverty/Energy Efficiency	£114.3	3.1	5.6	17.2	26.0	
	Housing Support	£51.2	2.0	2.6	5.5	10.0	
	More Homes	£722.5	18.2	32.9	105.7	156.8	
	Subtotal	£891.6	23.4	41.1	128.8	193.2	
Local Government	Criminal Justice Social Work	£86.5	2.6	3.0	11.5	17.0	
	Cycling Walking and Safer Routes	£7.4	0.2	0.3	1.1	1.6	
	General Capital Grant	£598.4	15.0	27.2	88.0	130.2	
	General Revenue Grant	£6,608.5	489.3	278.4	672.4	1,440.2	
	Local Government Attainment Grant	£120.0	2.8	2.9	7.0	12.6	
	Local Government Early Learning & Childcare Expansion	£202.2	4.0	6.2	30.1	40.3	
	Local Government Gaelic Grant	£4.5	0.2	0.2	0.4	0.8	
	Non-Domestic Rates	£2,636.0	195.2	111.1	268.2	574.4	
	Regional Transport Partnerships	£19.0	0.5	0.9	2.8	4.1	
	Transfer of Management of Development Funding (TMDF)	£92.2	2.3	4.2	13.6	20.1	
	Vacant and Derelict Land	£9.4	0.2	0.4	1.4	2.0	
	Subtotal	£10,384.0	712.3	434.8	1,096.4	2,243.4	
Office of the Scottish Charity Regulator	Office of the Scottish Charity Regulator	£3.0	0.1	0.1	0.3	0.5	
	Subtotal	£3.0	0.1	0.1	0.3	0.5	
Planning	Architecture & Place	£1.4	0.1	0.1	0.1	0.2	
	Building Standards	£0.3	0.0	0.0	0.0	0.0	
	Planning	£5.3	0.1	0.2	0.5	0.8	
	Planning & Environmental Appeals	£0.7	0.0	0.0	0.1	0.1	
	Subtotal	£7.6	0.2	0.3	0.8	1.2	
Scottish Housing Regulator	Scottish Housing Regulator	£4.5	0.2	0.2	0.4	0.8	
	Subtotal	£4.5	0.2	0.2	0.4	0.8	
Social Justice and Regeneration	Fairer Scotland	£27.8	0.5	0.6	1.4	2.5	
	Regeneration	£48.3	1.6	2.8	7.8	12.2	
	Subtotal	£76.1	2.1	3.4	9.1	14.6	
Social Security	Discretionary Housing Payments - Admin	£1.2	0.0	0.1	0.1	0.2	
	Discretionary Housing Payments - BTM	£50.1	1.0	1.0	2.5	4.5	
	Discretionary Housing Payments - Other	£10.9	0.5	0.5	1.0	1.9	
	Scottish Welfare Fund	£33.0	0.6	0.7	1.6	2.9	
	Scottish Welfare Fund - Admin	£5.0	0.1	0.1	0.5	0.6	
	Subtotal	£100.2	2.2	2.3	5.6	10.2	
Third Sector	Third Sector	£24.5	0.7	0.8	1.9	3.3	
	Subtotal	£24.5	0.7	0.8	1.9	3.3	
Total		£11,515.4	741.6	483.5	1,244.5	2,469.6	

Environment, Climate Change and Land Reform		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			Total
			Domestic			
			Direct	Indirect	Imported	
Climate Change	Climate Change - Policy Development & Implementation	£1.1	0.0	0.0	0.1	0.2
	Land Managers' Renewables Fund	£2.0	3.5	1.6	1.6	6.7
	Sustainable Action Fund	£18.7	0.8	0.9	1.7	3.3
	Subtotal	£21.9	4.3	2.5	3.4	10.2
Environmental Services	Drinking Water Quality Regulator	£0.3	0.0	0.0	0.0	0.0
	Land Reform	£5.6	0.1	0.1	0.3	0.5
	National Parks	£12.2	0.9	0.6	1.8	3.3
	Natural Assets & Flooding	£14.5	0.5	0.6	1.2	2.3
	Natural Resources	£4.1	0.2	0.2	0.4	0.7
	Private Water	£1.7	0.5	0.2	0.3	1.0
	Scottish Environment Protection Agency	£32.9	1.3	1.6	3.0	5.9
	Scottish Natural Heritage	£44.6	1.8	2.2	4.0	8.0
	Zero Waste	£20.5	18.6	3.0	5.3	26.9
	Subtotal	£136.4	23.9	8.5	16.3	48.7
Marine	Marine	£47.2	1.9	2.3	4.3	8.5
	Subtotal	£47.2	1.9	2.3	4.3	8.5
Research Analysis & Other	Contract Research Fund	£3.0	0.1	0.1	0.3	0.5
	Economic and Other Surveys	£1.4	0.0	0.1	0.1	0.2
	Programmes of Research	£47.3	0.7	1.6	5.1	7.4
	Royal Botanic Garden Edinburgh	£11.0	0.2	0.4	1.2	1.7
	Subtotal	£62.8	1.0	2.1	6.7	9.8
Scottish Water	Hydro Nation	£4.0	0.2	0.2	0.4	0.7
	Interest on Voted Loans	-£100.5	-31.6	-9.5	-16.6	-57.8
	Voted Loans	£210.0	10.1	7.6	56.3	73.9
	Subtotal	£113.5	-21.3	-1.8	40.0	16.9
Total		£381.7	9.8	13.6	70.7	94.1

Rural Economy and Connectivity (Part1)		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			
			Domestic			Total
			Direct	Indirect	Imported	
Air Services	Highlands and Islands					
	Airports Limited	£27.0	1.1	1.0	4.3	6.4
	Prestwick Airport	£6.5	0.0	0.1	1.4	1.5
	Support for Air Services	£16.8	34.3	1.1	4.0	39.4
	Subtotal	£50.3	35.4	2.1	9.8	47.3
Concessionary Fares & Bus	Concessionary Fares	£201.6	77.5	9.3	31.7	118.4
	Smartcard Programme	£3.3	0.5	0.1	0.6	1.2
	Support for Bus Services	£64.2	20.9	3.0	11.0	34.9
	Subtotal	£269.1	98.9	12.3	43.3	154.5
Digital Connectivity	Digital Strategy	£25.2	0.2	1.2	2.8	4.2
	Digital Strategy Capital	£34.2	0.3	0.5	5.1	5.8
	Subtotal	£59.4	0.5	1.7	7.8	10.0
EU Support & Related Services	Agri Environmental Measures	£46.4	59.7	8.1	17.9	85.7
	Broadband	£7.0	0.1	0.2	1.0	1.2
	Business Development	£27.8	20.2	3.0	11.4	34.6
	CAP Compliance Improvements	£31.0	1.0	1.4	3.9	6.3
	Crofting Assistance	-£0.2	-0.4	-0.1	-0.1	-0.6
	Forestry	£1.0	0.0	0.1	0.4	0.6
	Leader	£22.9	42.1	5.5	8.3	55.9
	Less EU Income	-£543.6	-967.9	-127.3	-197.9	-1,293.1
	Less Favoured Area Support Scheme	£65.5	120.3	15.8	23.8	159.9
	Other Pillar 1 Payments	£44.5	81.7	10.7	16.2	108.7
	Payments and Inspections Admin	£49.6	2.0	2.4	4.4	8.9
	Pillar 1 - Basic Payments	£262.0	481.3	63.1	95.4	639.7
	Pillar 1 - Greening Payments	£131.5	241.6	31.7	47.9	321.1
	Technical Assistance	£0.6	1.1	0.1	0.2	1.5
	Subtotal	£145.9	82.7	14.8	32.8	130.3
Ferry Services	Support for Ferry Services	£173.7	109.0	10.7	38.1	157.7
	Vessels and Piers	£66.8	0.6	1.0	13.8	15.5
	Subtotal	£240.5	109.6	11.7	52.0	173.2
Fisheries and Aquaculture Grants	Fisheries Grants	£14.1	0.6	1.1	4.1	5.8
	Fisheries Harbour Grants	£0.4	0.0	0.0	0.1	0.1
	Less Retained Income/Capital receipts	-£8.6	-0.4	-0.7	-2.5	-3.7
	Subtotal	£5.9	0.2	0.4	1.6	2.2
Forestry Commission	Forestry EC Receipts	-£20.8	-0.9	-2.8	-8.7	-12.3
	Policy Regulation & Administration	£3.9	0.2	0.5	1.6	2.3
	Programme Costs	£14.8	0.6	2.0	6.2	8.8
	Subsidy to Forest Enterprise	£19.7	0.9	2.4	7.7	11.1
	Woodland Grants	£46.0	2.0	6.1	19.1	27.3
	Subtotal	£63.7	2.8	8.3	26.0	37.1
Highlands And Islands Enterprise	Highlands and Islands Enterprise	£56.7	1.9	2.7	6.6	11.1
	Subtotal	£56.7	1.9	2.7	6.6	11.1
Motorways and Trunk Roads	Capital Land & Works	£249.0	4.8	8.6	44.2	57.6
	Forth Replacement Crossing	£7.2	0.2	0.3	1.1	1.6
	Forth and Tay Road Bridge Maintenance	£26.0	0.8	1.4	4.1	6.3
	M&T Other Current Expenditure	£13.6	0.6	1.1	2.5	4.2
	Network Strengthening	£57.8	0.7	1.2	12.6	14.4
	Private Finance Initiative (PFI) Payments	£74.9	3.4	6.0	13.7	23.1
	Roads Improvement	£39.2	0.5	0.8	8.6	9.8
	Routine and Winter Maintenance	£89.9	4.1	7.2	16.4	27.7
	Structural Repairs	£34.0	0.4	0.7	7.4	8.5
	Subtotal	£591.6	15.5	27.2	110.6	153.2

Rural Economy and Connectivity (Part 2)		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			
			Domestic			Total
			Direct	Indirect	Imported	
Other Transport Policy, Projects & Agency	Agency Administration Costs	£16.8	0.7	0.8	1.5	3.0
	Edinburgh Tram Inquiry	£1.5	0.1	0.1	0.1	0.3
	Future Transport Fund	£60.3	0.4	3.0	14.9	18.3
	Road Safety	£2.9	0.2	0.1	0.4	0.7
	Scottish Canals	£11.6	0.5	0.4	1.9	2.8
	Strategic Transport Projects Review	£5.2	0.3	0.2	0.7	1.3
	Support for Freight Industry	£1.0	0.3	0.1	0.2	0.5
	Support for Sustainable & Active Travel	£79.0	1.3	1.7	15.5	18.4
	Transport Information	£1.2	0.1	0.1	0.2	0.3
	Travel Strategy & Innovation	£5.3	0.3	0.2	0.7	1.3
	Subtotal	£184.7	4.1	6.7	36.0	46.8
Rail Services	Major Public Transport Projects	£31.6	0.4	0.6	6.9	7.9
	Rail Development	£6.2	0.3	0.3	0.9	1.5
	Rail Franchise	£183.4	34.0	20.4	27.5	81.9
	Rail Infrastructure	£587.6	5.3	9.2	121.8	136.2
	Subtotal	£808.8	39.9	30.6	157.0	227.5
Rural Services	Agricultural and Horticultural Advice and Support	£4.5	0.2	0.1	0.3	0.6
	Animal Health	£15.2	0.4	0.8	1.0	2.3
	Crofting Commission	£2.8	0.1	0.1	0.2	0.5
	Food Industry Support	£5.0	9.2	1.2	1.8	12.2
	Rural Cohesion	£0.6	1.1	0.1	0.2	1.5
	Veterinary Surveillance	£4.2	0.1	0.2	0.3	0.6
	Subtotal	£32.3	11.1	2.7	3.9	17.7
Total	£2,509.0	402.4	121.2	487.4	1,011.0	

Culture, Tourism and External Affairs		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			
			Domestic			Total
			Direct	Indirect	Imported	
Culture, Tourism & Major Events	Creative Scotland and Other Arts	£70.3	2.1	4.1	5.6	11.8
	Cultural Collections	£63.9	1.2	4.1	5.0	10.3
	Major Events	£36.8	0.7	2.6	2.4	5.7
	National Performing Companies	£22.9	0.6	0.9	2.6	4.0
	Tourism	£42.5	0.3	2.4	2.2	4.9
	Subtotal	£236.3	4.8	14.2	17.8	36.8
	External Affairs	British Irish Council International & European Relations	£0.1	0.0	0.0	0.0
		£17.2	0.7	0.8	1.5	3.1
Subtotal		£17.3	0.7	0.8	1.5	3.1
Historic Environment Scotland	Historic Environment Scotland Capital Expenditure	£6.0	0.1	0.1	1.0	1.2
	Historic Environment Scotland Less Income	-£57.1	-1.1	-4.2	-3.4	-8.7
	Historic Environment Scotland Operational Costs	£89.7	1.8	6.7	5.3	13.7
	Subtotal	£38.6	0.7	2.6	2.9	6.2
	National Records of Scotland	Less National Records of Scotland - Retained Income	-£5.8	-0.2	-0.3	-0.5
National Records of Scotland - Capital Expenditure		£2.9	0.1	0.1	0.4	0.6
National Records of Scotland - Operational Costs		£37.3	1.5	1.8	3.3	6.7
Subtotal		£34.4	1.4	1.7	3.2	6.3
Total		£326.6	7.6	19.3	25.5	52.3

Administration		Spend £m	Estimated GHG emissions			Total
			Domestic		Imported	
			Direct	Indirect		
Administration Programme	Accommodation	£15.9	0.7	0.8	1.4	2.8
	Administration Retained					
	Income	-£16.5	-0.7	-0.8	-1.5	-2.9
	Capital Projects	£13.1	0.3	0.6	1.9	2.8
	Office of Queen's Printer for Scotland	£0.1	0.0	0.0	0.0	0.0
	Other Office Overheads	£28.5	1.1	1.3	2.5	5.0
	Scottish Government Staff					
	Costs	£133.1	5.5	6.4	11.8	23.8
	Training	£3.8	0.2	0.2	0.3	0.7
	Subtotal	£178.0	7.1	8.5	16.6	32.2
Total		£178.0	7.1	8.5	16.6	32.2

Crown Office and Procurator Fiscal Service		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			Total
			Domestic		Imported	
			Direct	Indirect		
Crown Office & Procurator Fiscal Service	Crown Office & Procurator Fiscal Service	£112.0	4.6	5.4	10.2	20.2
	Subtotal	£112.0	4.6	5.4	10.2	20.2
Total		£112.0	4.6	5.4	10.2	20.2

Scottish Parliament and Audit Scotland		Spend £m	Estimated GHG emissions (thousands of tonnes of CO ₂ equivalent)			Total
			Domestic		Imported	
			Direct	Indirect		
Audit Scotland	Audit Scotland	£6.8	0.1	0.2	0.3	0.6
	Subtotal	£6.8	0.1	0.2	0.3	0.6
Scottish Parliament Corporate Body	Scottish Parliament	£89.8	3.7	4.3	8.1	16.1
	Subtotal	£89.8	3.7	4.3	8.1	16.1
Total		£96.6	3.8	4.5	8.4	16.7



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