



An Roinn Airgeadais
Department of Finance

Consultation on the options for the use of revenues raised from increases in Carbon Tax

30th May 2019

Prepared by the Tax Division,
Department of Finance
www.gov.ie/finance

Consultation Purpose

To ascertain the views of the public on the options for the use of revenues raised from increases in Carbon Tax

Consultation Period

Submissions in relation to this public consultation must be received by 5pm on 28 June 2019. Any submissions received after this date will not be considered.

How to Respond

The preferred means of response is by email to: carbontax@finance.gov.ie

Alternatively, you may respond by post to:

Use of Carbon Tax Revenues – Public Consultation,
Tax Division,
Department of Finance,
Government Buildings,
Upper Merrion Street,
Dublin 2
D02 R583

Please include contact details if you are responding by post.

When responding, please indicate whether you are contributing to the consultation process as a professional adviser, representative body, business or member of the public.

Freedom of Information

Responses to this consultation are subject to the provisions of the Freedom of Information Acts. Parties should also note that responses to the consultation may be published on the website of the Department of Finance.

After the Consultation

This consultation will inform the Tax Strategy Group process and will also feed into the Government's considerations in reviewing proposals in respect of Carbon Tax ahead of Budget 2020.

1 Background information

Carbon Tax

1.1 The Climate Change Advisory Council recognises that the Carbon Tax sets a ‘real-world’ price on the adverse environmental impact of greenhouse gas emissions. With the imposition of a Carbon Tax:

- Households and businesses are incentivised to reduce their carbon emissions through reduced consumption of fossil fuels.
- Households and businesses are incentivised to take investment decisions (investing in energy efficiency, renewable energy and the use of lower carbon transport options) which reduces their consumption of fossil fuels.
- The government can use revenue from carbon taxation to fund expenditure, including addressing negative impacts of the Carbon Tax on vulnerable households and supporting the low-carbon transition.

1.2 The Commission for Taxation 2009 recommended the introduction of a tax on carbon emissions from fossil fuels released for consumption in Ireland in order to broaden the tax base and to protect and enhance the environment.

1.3 This policy was adopted and the Carbon Tax was introduced on a phased basis beginning in 2009. The tax is levied on suppliers of fossil fuels to Irish consumers, private individuals and businesses, and covers around 50% of all economy wide CO₂ emissions. The tax does not include other greenhouse gases like methane or nitrous oxide nor does it apply to the Emissions Trading System (ETS) sector, where greenhouse gas emissions are already subject to a European-wide carbon price. The current carbon price of an allowance in the ETS system is about €25 per tonne of CO₂. As a result, electricity is exempt from the Carbon Tax.

1.4 According to the CSO, businesses contribute 52.4% of Carbon Tax receipts with the remainder coming from private motorists/households. To the extent that businesses pass through these costs to their Irish consumers, it can be inferred that the majority of the Carbon Tax is ultimately paid by private motorists/households.

1.5 Since its introduction in 2009, Carbon Tax has generated revenues of over €3 billion for the Exchequer. Receipts of €440m are forecast in 2019 on a no policy change basis. The table overleaf provides a breakdown of Carbon Tax receipts by year and fuel type.

Year	Auto Diesel	Petrol	Kerosene	Marked Gas Oil	Natural Gas	Solid Fuel	Other Fuels	Total Net Receipts
2010	€98m	€65m	€17m	€27m	€11m	-	€4m	€222m
2011	€98m	€60m	€41m	€49m	€43m	-	€8m	€299m
2012	€131m	€75m	€40m	€55m	€45m	-	€9m	€355m
2013	€137m	€70m	€47m	€60m	€57m	€7m	€10m	€388m
2014	€145m	€66m	€42m	€54m	€52m	€17m	€9m	€385m
2015	€158m	€62m	€53m	€55m	€57m	€23m	€11m	€419m
2016	€171m	€59m	€53m	€56m	€56m	€24.4m	€11m	€430m
2017	€180m	€54m	€52m	€49m	€54m	€19m	€12m	€420m
2018	€183m	€48m	€59m	€54m	€50m	€25m	€12m	€431m

The Future of Carbon Tax in Ireland

1.6 In recent years the EU, the OECD and the Climate Change Advisory Council among others have called for an examination of the approach to Carbon Tax in Ireland. The general recommendation of such bodies is to set a long term pathway which would give certainty for business decision makers and consumers. This certainty would allow them to make informed investment decisions, which incorporate the environmental consequences of these investments. This should also promote research and development in alternatives to fossil fuel technologies. The current rate of the Carbon Tax is €20 per tonne on all applicable fuels. The Climate Change Advisory Council have recommended the rate be increased to €80 per tonne by 2030, while the Joint Oireachtas Committee are of the view that a carbon price trajectory would play an important role in the State's response to climate change.

1.7 On a straight line basis an increase in the Carbon Tax rate of €5 per tonne of CO₂ emitted will raise around €110m in additional tax revenue per annum. However, should the Carbon Tax increase to €80 per tonne, the additional revenue raised will depend on how individuals, businesses and the economy at large react to the tax. For example, it may be expected that at higher rates of Carbon Tax persons and businesses will be incentivised to switch to less carbon intensive technologies. Other things being equal, this suggests that the additional revenue received for every €5 increase in the Carbon Tax rate may reduce over time.

Cost to consumers

1.8 The table below shows the impact of the Carbon Tax on the average price of a typical fuel bundle at the current rate and at rates of €40 per tonne and €80 per tonne, respectively.

This is based on an assumption of full pass through of additional taxes by fuel suppliers to consumers and that there is no change in commercial margins.

Commodity	Typical Volume Sold	Average Retail Price (incl €20 Carbon Tax)¹	Price with Carbon Tax @€40²	Price with Carbon Tax @€80²
Diesel	60 litres	€82.20	€86.13	€94.00
Petrol	60 litres	€85.38	€88.77	€95.54
Kerosene (Home Heat)	900 litres	€693.00	€744.82	€848.46
Coal (Standard)	40 kg	€18.66	€21.05	€25.83
Peat Briquettes	12.5 kg	€4.50	€5.02	€6.06

1.9 The Carbon Tax, at the current rate, typically forms only a very small proportion of the retail price for auto fuels (currently around 3-4% of the retail price of a litre of petrol and diesel). Total taxes on a litre of petrol and diesel are currently about 61% and 55% of the average retail price, respectively. The Carbon Tax forms a larger amount of the retail price on the most carbon intensive fossil fuels, like coal and peat.

1.10 Some research has been conducted into the direct and indirect impacts of the Carbon Tax across different households and businesses³. The research generally highlights that the Carbon Tax is distributed unevenly across households, related to a number of variables. For example, it has been found that richer households incur higher Carbon Tax costs than poorer households, but poorer households pay a higher proportion of their income in Carbon Tax costs than richer households, particularly home heat related Carbon Tax. Household size and type has also found to be a relevant variable, with households with 3 or more adults associated with greater motor vehicle related Carbon Tax costs while households with 3 or more children associated with greater home heat related Carbon Tax costs. In terms of direct impacts, for illustrative purposes, Annex 1 provides estimates of the annual Carbon Tax charge incurred by different types of households and motorists in respect of the consumption of different fossil fuels.

Current Supports - Households

1.11 The use of complementary income supports to assist with the additional expenses of the Carbon Tax in Ireland has ensured its successful implementation as a tax. The fuel

¹ Average retail prices for diesel and petrol are based on the AA Fuel Price Survey April 2019 while average retail prices for Kerosene and Solid Fuels are based on SEAI 'Domestic Fuels Comparison of Energy Costs' January 2019.

² Department of Finance static estimates. Assumed that there is full pass through of additional taxes by fuel suppliers to consumers and that there is no change in commercial margins but assume no behavioural response in fuel consumer's demand or supplier's quantity supplied.

³ For example: "What Factors Drive Inequalities in Carbon Tax Incidence? Decomposing Socioeconomic Inequalities in Carbon Tax Incidence in Ireland", Niall Farrell, ESRI Working Paper No. 519, 2015. "The economic and environmental impacts of increasing the Irish carbon tax", Kelly De Bruin, Aykut Mert Yakut, ESRI Research Series No. 79, 2018.

allowance is a payment under the National Fuel Scheme to help income constrained households with the cost of heating homes during the winter months. It is paid to people who are dependent on long-term social welfare payments and who are unable to provide for their own heating needs. In 2018 the fuel allowance was paid to some 364,000 households. The current fuel allowance is paid at €22.50 per week for 28 weeks at a total cost of €230m to the Exchequer. In relation to road transport, the payment under the Fuel Grant Scheme (an ancillary part of the Disabled Drivers and Disabled Passengers Scheme) is equivalent to the sum of the excise duty rate and the Carbon Tax rate.

1.12 There are also a number of Government funded home energy efficiency upgrade schemes available to households to help them reduce their fuel needs:

- The Better Energy Homes scheme is available to all homeowners and has provided grants of €238m to over 220,000 homes since its introduction in 2009;
- The Better Energy Warmer Homes Scheme provides grants for the full costs of energy efficiency improvements in the homes of the elderly and most vulnerable to fuel poverty, providing energy efficiency measures free of charge to over 140,000 low income households at a cost of over €220m since 2000;
- The Better Energy Communities scheme provides upgrades to homes in fuel poverty within wider community energy efficiency projects. Various funding levels are available, with up to 80% of the cost of improvements provided under this scheme for homes at risk of fuel poverty;
- The Social Housing Retrofit Programme has upgraded the energy efficiency of over 68,000 local authority homes, benefitting those at risk of fuel poverty, at a cost of €128m since 2013;
- Pilot schemes such as the Warmth and Wellbeing scheme and the Deep Retrofit Programme also provide free or highly subsidised energy efficiency retrofits to homes of people at risk of energy poverty.

Current Supports - Businesses

1.13 There are other supports in place to help businesses pay for auto diesel expenditure. There is a VAT refund scheme for diesel expenditure incurred in respect of business travel. Nominally, any increase in the Carbon Tax will, other things being equal, see an increase in the revenue foregone to the Exchequer through increased claims on the VAT rebate scheme. However this is revenue that the State does not currently have. The end result is that businesses that can avail of this scheme pay auto fuel at a rate of 81% (1/1.23) of that paid by private motorists.

1.14 The Diesel Rebate Scheme, introduced in 2013, offers a partial excise refund to qualifying hauliers and bus operators, based on the retail price of a litre of diesel. The rebate kicks in when the (average) price at the pumps goes above €1.23 per litre; increasing gradually to a maximum rebate of 7.5c per litre when the (average) price reaches €1.54 per litre. Currently the average retail price of diesel is about €1.37, which entitles qualifying businesses to a rebate of about 3.5c per litre. Any increase in the Carbon Tax which serves to increase auto diesel prices will, other things being equal, see an increase in revenue foregone

to the Exchequer through increased expenditure on the Diesel Rebate Scheme. Put simply, if a doubling of the Carbon Tax causes a litre of diesel to increase by 6.6c (i.e. full pass through), for every 100 million litres that are claimed the Exchequer is exposed to an additional €1.6m under the Scheme. At its peak year (2014) more than 400 million litres were claimed under the Scheme at a cost of €21 million in revenue foregone to the State.

Exchequer exposure to ‘offsets’

1.15 Without making any enhancements to the existing schemes described above the Exchequer is exposed to increased claims in the event of increases in the rate of carbon tax. If enhancements are made to fully shield targeted households and businesses from the impacts of Carbon Tax increases the Exchequer exposure to these ‘offsets’ would increase significantly.

1.16 Another Exchequer exposure arising from increases in the Carbon Tax is loss of excise and VAT revenues that currently comes from cross border fuel tourism. The ESRI (2018) has estimated that the Exchequer directly benefits by around €230m annually through cross border tourism in diesel and petrol⁴. Any reduction or elimination of the price differential North and South would see a reduction or elimination in the Exchequer gains from cross border fuel tourism. This could also be impacted by currency movements, for example if sterling were to weaken significantly against the Euro.

ESRI/Department of Finance research on Environmental Impacts of Carbon Tax Increases

1.17 In March 2019, the ESRI published research on the environmental and economic impacts of an incremental increase in Carbon Tax over the period to 2030⁵. This analysis examined two scenarios each involving an initial doubling the rate of Carbon Tax, followed by annual increases of €5 and €10 per tonne thereafter leaving tax rates at €95 per tonne and €150 per tonne respectively by 2030. The resulting carbon revenues were assumed to be recycled through a lump sum transfer to households.

1.18 The paper suggests that the overall level of output in the economy (GDP) will not be significantly impacted, as both consumers and producers are assumed make changes to their behaviour (i.e. carbon consumption) in the face of pre-announced increases in Carbon Tax of this nature. Overall, the level of GDP is some -0.5 to -0.7 percentage points lower by 2030, relative to a baseline of unchanged Carbon Tax rates. In terms of environmental impact, carbon emissions from the non-ETS sector are projected to fall by 17 and 26 per cent under the €95 per tonne and €150 per tonne scenarios respectively, again relative to a baseline of unchanged tax rates.

⁴ The Scale of “Fuel Tourism” Across the Irish Border, Kennedy et al, ESRI Research Bulletin January 2018.

⁵ <https://www.esri.ie/publications/the-effects-of-an-incremental-increase-in-the-irish-carbon-tax-towards-2030>

1.19 In terms of the effect on fuel prices, LPG, diesel and petrol prices are impacted the most, with prices rising by up to 10 per cent by 2020⁶ relative to baseline. In terms of sectoral exposures, the energy and transport sectors are hardest hit experiencing losses in value added of up to 4 per cent by 2020. Overall, households are estimated to experience a decline in real disposable incomes of up to 0.4 per cent by 2020, on foot of increases in the overall price level of up to 2.4 per cent (where prices are measured by the consumer price index). Household transport costs could be expected to be up to 5.5 per cent higher, with residential heating costs up to 4.6 per cent higher by 2020 relative to baseline.

1.20 The results indicate that although tax increases of this magnitude can help initiate decoupling in the link between carbon emissions and economic growth, tax changes alone will not be sufficient to meet our emissions target reductions.

1.21 Due to limitations within the ESRI's *Ireland Environment-Energy-Economy* (I3E) model, the distributional impact of these scenarios by household income level and geographic location (urban/rural split) was not examined. Given the importance of these impacts under any scenario where Carbon Tax is increased, the Department of Finance is funding further development of the model under its 2019 Joint Research Programme with the ESRI in order to produce this analysis. Findings from this research, together with further work using the ESRI's SWITCH model will be considered in conjunction with the outcome of this public consultation, and will inform the Department's position which will be set out in the context of the annual Tax Strategy Group paper.

⁶ Figures are shown for 2020 here as the I3E model relies on a relative prices framework meaning that precise price impacts over a longer timeframe tend to be less robust.

2. Joint Oireachtas Committee on Climate Action

2.1 The Joint Oireachtas Committee on Climate Action published its cross-party report entitled, “Climate Change: A Cross-Party Consensus for Action” on 29th March 2019. The Committee was established to consider the third report and recommendations of the Citizens’ Assembly entitled “How the State can make Ireland a Leader in tackling Climate Change”.

Use of proceeds from carbon pricing policy

2.2 At present the Carbon Tax raises approximately €440 million per annum. In contrast, the Department of Public Expenditure and Reform has suggested that the Government will spend more than €1.6 billion in 2019 on expenditure measures which contribute to reducing greenhouse gas emissions⁷. This sum does not include supports paid directly to households and businesses to mitigate against high fuel prices. However, there is no direct link from Carbon Tax receipts to such expenditures, with the proceeds going into the Central Fund as part of Exchequer revenue.

2.3 It should be noted that hypothecation is not a feature of the Irish tax system in general and the hypothecation of revenue receipts has generally not been favoured as it reduces the flexibility of the Government to prioritise and allocate funds as necessary at a particular time. If it is decided to return the proceeds of any increase in Carbon Tax through specified mechanisms, this reduces the revenues available to go towards essential public services provided for the general good such as health and welfare, security, etc. However, investment in long term measures such as improved energy efficiency in homes can reduce the need for income supports in the long term and has been linked to reduced healthcare usage⁸.

2.4 The Committee is of the view that “any increases in carbon pricing must be hypothecated by legislation and used in a transparent manner to ensure public acceptability. It is also the view of the Committee that a reasonable call on general Exchequer funds to pay for State actions to support the transition to a low-carbon future is both justified and necessary for the foreseeable future irrespective of any carbon price increase.”

2.5 The Climate Change Advisory Council noted that poorer households and more vulnerable communities need to be protected from the consequences of increases in the Carbon Tax. Such households tend to spend significant proportions of their budgets on energy and they may not have the same options to invest in energy upgrades as those with significant disposable income or access to funding. With this in mind the Committee recommended that the Government should, prior to the introduction of any increase in carbon taxation, examine the impacts on low-income families and, on the basis of these findings, introduce specific policy measures to assist those who may not be in a position to immediately transition from

⁷ The Implementation of Green Budgeting in Ireland - <https://igees.gov.ie/wp-content/uploads/2019/01/The-Implementation-of-Green-Budgeting-in-Ireland.pdf>

⁸ IEA, “Capturing the Multiple Benefits of Energy Efficiency”, 2014.
https://www.iea.org/publications/freepublications/publication/Captur_the_MultiplBenef_ofEnergyEfficiency.pdf

fossil fuels, including the potential use of social protection mechanisms, such as tax credits and welfare payments.

2.6 Specifically, the Committee agreed that revenues from the increased Carbon Tax should not go into the central fund but be ring-fenced (or hypothecated) by legislation. The Committee further acknowledges that there are two main alternative uses for hypothecated carbon pricing revenues, which are not necessarily mutually exclusive:

1. Put the proceeds of the increased Carbon Tax into a fund to be used as follows:
 - a. To compensate those likely to suffer from fuel poverty as a result of low income, poor quality accommodation, or exceptional energy needs, for example by increasing the fuel allowance or other payment, directly alongside the offer of participation in a home energy retrofit or upgrade; and
 - b. To use the balance for climate actions such as energy retrofitting.
2. To return the proceeds by way of a dividend to all individuals or households (“tax and dividend” approach). Most individuals/ households would be net beneficiaries with those on lowest incomes potentially gaining the most, while all purchasers and investors would still have a price incentive towards lower-carbon options.

2.7 The Joint Oireachtas Committee noted that the first approach provides an extra stream of revenue to finance climate action, particularly in areas such as retrofitting or public transport, and that this was the option that the Citizens’ Assembly voted for. Nevertheless, the Committee stated that the Tax and Dividend model was not put to the Citizens’ Assembly as an alternative. The Committee is of the view that both options should be thoroughly considered in a public consultation process.

2.8 The Department notes that there is currently a levy on petroleum products part of which will be redirected to a Climate Action Fund which supports climate change objectives. The Department of Communications, Climate Action and Environment has responsibility for implementing the Climate Action Fund, which will have an allocation of at least €500 million over the period to 2027. The objective of the Fund is to support initiatives that contribute to the achievement of Ireland's climate and energy targets in a cost effective manner, or offer the potential for innovative interventions in these sectors, and which, in the absence of support from the Fund, would not otherwise be developed.

2.9 In regard to a ‘tax and dividend’ model, an equal dividend to each household could be paid. The Department considers that varying the dividend according to, for example, the size or structure of the household may not be practically feasible from an administration perspective.

Next Steps

2.10 This consultation will inform the Tax Strategy Group process and will also feed into the Government's considerations in reviewing proposals in respect of Carbon Tax ahead of Budget 2020.

2.11 In responding to this consultation you are invited to:

- Give your views on the options outlined in section 3.
- Where appropriate, provide details of your preferred approach recalling the evaluation principles of displacement⁹, and the opportunity cost of using public funds.
- Provide details of any alternative approaches or options you consider might be beneficial in addressing the issue, for example any approaches successfully adopted elsewhere; including details of similar approaches adopted elsewhere.
- Provide details of other relevant issues not covered in this paper.
- Comment generally on the direction you would like to see tax policy in this area to develop.

2.12 Your views are important as they may help influence the taxation treatment and policy to be applied in the future.

⁹ Displacement refers to a situation where some of the benefits associated with the scheme occur at the expense of non-beneficiaries.

3. The Consultation options

3.1 Do you agree that additional revenue raised as a result of an increase in the rate of Carbon Tax above €20 per tonne, should be used:

- a. To increase the fuel allowance to compensate those households likely to suffer from fuel poverty;
- b. To enhance the current grants towards the cost of energy efficiency improvements in the homes of those most vulnerable to fuel poverty through the Better Energy Homes scheme or the SEAI Better Energy Warmer Homes scheme;
- c. To fund sustainable transport including cycling infrastructure and public transport;
- d. For broad climate actions (e.g. earmarked to the Climate Action Fund or similar);
- e. To return the proceeds by way of a dividend to citizens or households through the social welfare and/or tax system;
- f. To be set aside to meet any fines the State is liable to pay arising from failure to meet our climate targets;
- g. To act as a buffer against increasing the cost of doing business for businesses with no realistic short to medium term alternative to continued fossil fuel use and for whom fossil fuels constitute a large amount of overall business expenditures (e.g. by enhancing the Diesel Rebate Scheme);
- h. To incentivise business moving away from the use of fossil fuels to more sustainable production methods;
- i. by the Exchequer for general government expenditure;

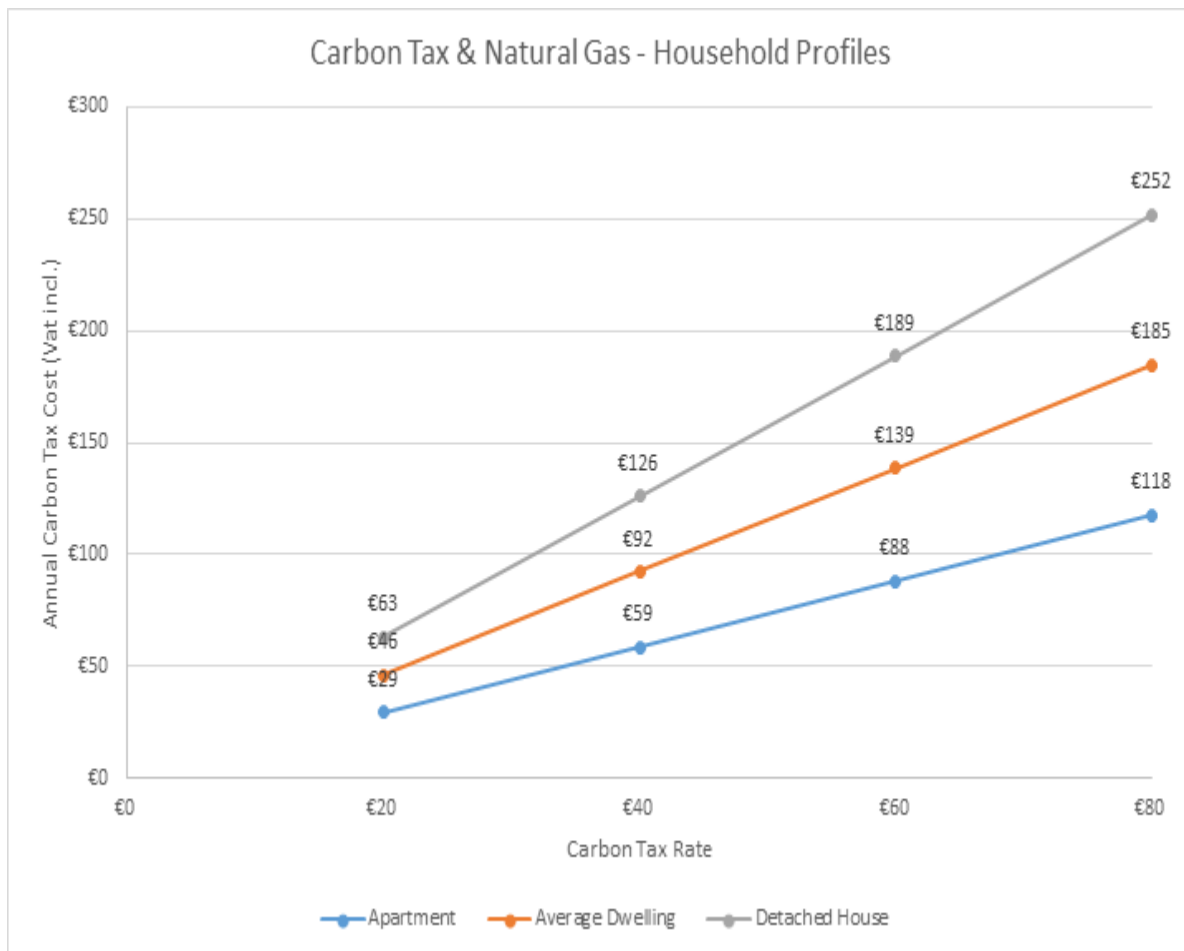
3.2 Otherwise please provide details of your preferred option if different to any of those listed above.

Annex1: Impact of Carbon Tax Increases on Households

A. Estimated Impact on Households using Natural Gas

The Utilities Regulator (“CRU”) published residential annual gas consumption data in 2017¹⁰. It found that the average apartment dwelling (1-3 bedrooms) consumed 7,000 kwh per annum, the average detached house 15,000 kwh per annum and the overall average dwelling 11,000 kwh per annum.

Based on these averages, the graph below shows the **annual** Carbon Tax (Vat incl.) cost for different types of households at rates of €20, €40, €60 and €80 per tonne CO2 assuming no change in fuel consumption patterns.



¹⁰ <https://www.cru.ie/wp-content/uploads/2017/07/CER17042-Review-of-Typical-Consumption-Figures-Decision-Paper-1.pdf>. The consumption figures are residential credit customers.

B. Estimated Impact on Households using Kerosene by House Size and BER Rating

SEAI have estimated the energy demands/needs of typical small, medium and large homes by BER rating¹¹. The context of the SEAI estimates was to demonstrate the impact of switching from an oil boiler – the most popular form of home heat in Ireland – to air sourced heat pumps.

The table below uses these SEAI estimates to provide an estimate of the annual home heat carbon tax cost – at the current rate of €20 per tonne - for households currently using kerosene, by home size and home BER rating.

	<i>SMALL HOME</i>		<i>MEDIUM HOME</i>		<i>LARGE HOME</i>	
BER RATING	AB	EFG	AB	EFG	AB	EFG
MWh per year for home heat	3.5	12.3	4.6	18.8	7.1	26.3
Equivalent litres KEROSENE	344	1,208	452	1,847	697	2,583
Kerosene Carbon Tax Rate (per litre)	0.05073	0.05073	0.05073	0.05073	0.05073	0.05073
Carbon Tax (VAT Excl)	17.44	61.29	22.92	93.69	35.38	131.06
Add: VAT (@13.5%)	2.35	8.27	3.09	12.65	4.78	17.69
Carbon Tax (VAT Incl)	€20	€70	€26	€106	€40	€149

Note: SEAI Conversion: 1 Kwh = 10.18 litres of kerosene

Thus to estimate the Carbon Tax charge at rates of €40, €60 and €80, respectively, simply multiply the figures in the table by 2, 3 and 4, respectively.

¹¹ <https://www.seai.ie/resources/publications/Replacing-oil-boilers-with-heat-pump-household-economics-and-system-wide-impacts-Summary-document-.pdf>

C. Broad estimate of impact on private motorists with average fuel consumption levels

Based on CSO 2017 data¹² it is possible to provide a *broad* estimate of the average Carbon Tax cost on the fuel consumed *annually* by private motorists, by petrol and diesel engine.

2017 – current Carbon Tax rate	Diesel	Petrol
No litres consumed (ktoe)	1,259	744
Conversion to litres	1,489,397,000	985,800,000
No. passenger cars	1,040,190	1,009,242
Average litres consumed per car	1,432	977
Carbon Tax Charge @€20	0.0533	0.04587
Average Carbon Tax (excl. Vat)	€76	€45
Add: VAT @23%	1.23	1.23
Average Carbon Tax (incl Vat)	€94	€55

Note: SEAI Conversion: 1 tonne = 1,183 litres of diesel and 1,325 litres of petrol

Multiply the bottom line in the table above by 2, 3 and 4 in order to derive *broad* estimates of the annual costs at Carbon Tax rates of €40, €60 and €80, respectively.

It is recognised that there is likely to be a lot of private motorists whose annual fuel consumption is not close to the number of litres in the table above. Annual fuel consumption is a function of distance travelled and the fuel economy rate achieved. In turn this is a function of a myriad of factors such as availability of good public transport for work purposes, commuting distance, engine type and size, road environment, driving style, weather, etc.

The tables overleaf shows the Carbon Tax cost (Vat incl.) – at the current rate of €20 per tonne CO₂ – across a broad spectrum of distances travelled and fuel economy rates.

¹² See CSO Table THA 17 (Road Traffic Volumes)

PETROL CAR

		<i>Km</i>	<i>3,429</i>	<i>6,859</i>	<i>13,717</i>	<i>20,576</i>	<i>27,434</i>
MPG	Fuel Economy Rate (L/100Km)	25% Average Distance	50% Average Distance	Average Distance	150% Average Distance	Twice Average Distance	
56	5	€10	€19	€39	€58	€77	
47	6	€12	€23	€46	€70	€93	
40	7	€14	€27	€54	€81	€108	
35	8	€15	€31	€62	€93	€124	
31	9	€17	€35	€70	€104	€139	

DIESEL CAR

		<i>Km</i>	<i>5,505</i>	<i>11,010</i>	<i>22,019</i>	<i>33,029</i>	<i>44,038</i>
MPG	Fuel Economy Rate (L/100Km)	25% Average Distance	50% Average Distance	Average Distance	150% Average Distance	Twice Average Distance	
56	5	€18	€36	€72	€108	€144	
47	6	€22	€43	€87	€130	€173	
40	7	€25	€51	€101	€152	€202	
35	8	€29	€58	€115	€173	€231	
31	9	€32	€65	€130	€195	€260	

Multiply the figures in the table above by 2, 3 and 4 in order to derive the annual costs at Carbon Tax rates of €40, €60 and €80, respectively.