Carbon Dividend Policy

June 2020

green
party
comhaontas glas

Contents

1 Executive Summary

In the light of the existential challenge to humanity that is climate change (or as some refer to it as the climate emergency), it is urgent that, in tandem with other initiatives, that action is urgently undertaken to reduce damaging emissions.

In addition, Ireland is facing EU fines of up to €600m annually if Ireland does not reduce its Green House Gas (GHG) emissions[1].

One way to do this is by taxing those emissions by means of a carbon tax, so encouraging behavioural change by residents and business. This was a strong recommendation of the Citizens Assembly on Climate Change and indeed such taxes are being implemented by many governments[2].

It should be remembered that it was due to Green Party government policy that Ireland was one of the first countries in the world to introduce a carbon tax and rebate system in 2010. This tax was €15 per tonne and it has been increased just twice by a total of €11 per tonne in the last 10 years.

The Intergovernmental Panel on Climate Change (IPCC) target is for every country to have halved their climate emissions by 2030 and to be carbon neutral by 2050.

The Economic and Social Research Institute (ESRI) reports[3] that carbon emissions reduce by 3.94%for a carbon tax increase of €30 per tonne, and 10.24% for an increase of €80 per tonne. Accordingly, for a 50% reduction Ireland may have to introduce a carbon tax of€400 per tonne by 2030 and eliminating emissions by 2050 will require a carbon tax of €800 per tonne.

We believe that such large tax increases will not be necessary, as Irish residents and businesses realise the urgency of the climate emergency and move away from fossil fuels and other products which are sources of greenhouse gas emissions. Cognisant of the need to allow time for industry to adapt, we propose to adjust the tax over the period, 2020

[1] https://www.independent.ie/irish-news/ireland-faces-annual-eu-energy-fines-of-600m-36857141.html
[2] https://www2.gov.bc.ca/gov/content/environment/climate-change/planning-and-action/carbon-tax
[3] https://www.esri.ie/publications/carbon-taxation-in-ireland-distributional-effects-of-revenue-recycling-policies

to 2030 (and then to 2050). To ensure that behavioural change does occur we propose starting with immediate increases to bring the carbon tax rate in Ireland to €200 per tonne over the next three years which will result in at least a 20% reduction.

We propose that 90% of the carbon tax collected will be redistributed equally to all residents of the same age and location. The ESRI report, referenced previously, states that 70% of residents will receive a cash benefit from the introduction of this Carbon Dividend Scheme as the dividend will be more than the extra cost of carbon tax experienced.

This concept of Carbon Dividend was included in the Green Party General Election 2020 manifesto. This policy expands on that concept and proposes a model as to how it can be achieved.

In addition, we propose that 10% of the tax collected be used to ensure that Ireland reaches its 0.7% Gross National Income (GNI) aid commitment and that this money be earmarked for climate change adaptation measures. Focusing on countries suffering from climate change to compensate them in part for Ireland's unsustainable and GHG emissions.

2 Introduction and Discussion

Carbon and other Green House Gas (GHG) emissions from the burning of fossil fuels amount to over 39% of Ireland's carbon footprint and the agriculture sector (i.e. mostly meat and dairy[4]) amounts to a further 33% (see EPA Breakdown of Ireland's Carbon Footprint pie chart attached at Appendix A).

- Climate change can be slowed by the elimination of all carbon and other GHG emissions from all fossil fuels and their reduction from other sources, and in particular from the meat industry.

- Carbon emissions can be stopped by introducing a carbon tax[5] The current rate of carbon tax in Ireland is €26[6] per tonne. Sweden charges $168 (€144) per tonne. Every €1 per tonne adds approximately 1/3rd of a cent to the price of a litre of petrol/diesel/kerosene or a kg of coal or turf. It is expected a carbon tax will reduce GHG emissions and encourage less use of the services or consumption of the products that emit GHG. Due the urgency of this issue we believe that a carbon tax of €200 per tonne is appropriate[7].

- Because the effect of carbon tax will be to increase the price of fuel for transport and energy, each legal resident[8] will experience a cost increase in their purchase of fuel whether for heating, light or transport. Similarly, the effect of a carbon tax on meat or on airline fuel will be to increase those prices.

- A Carbon Dividend compensates the legal resident for those cost increases, and for 70% of legal residents in Ireland, the Carbon Dividend will exceed that extra cost[9]. (The Carbon Dividend is the amount of money which is to be given by the state to each legal resident as compensation for the climate change being caused in the

[4] http://www.epa.ie/ghg/agriculture/
[5] https://www.oecd-ilibrary.org/taxation/effective-carbon-rates-2018_9789264305304-en
[6] https://www.citizensinformation.ie/en/money_and_tax/tax/motor_carbon_other_taxes/carbon_tax.html
[7] The ESRI research already quoted states that a €30 euro per tonne increase will lead to a 3.94% reduction. Therefore if we are to achieve a 100% reduction we will require a carbon tax of about €800 per tonne. This we believe is not necessary as we expect when a €200 per tonne carbon tax is in place that behaviours will change and expect that only renewable alternatives will be used. However this can be adjusted upwards should behaviours not change sufficiently.
[8] For the purposes of this policy document, a legal resident is one who has a PPSN (https://www.revenue.ie/en/jobs-and-pensions/personal-public-service-number/index.aspx) and has an address and bank account in the Republic of Ireland
[9] https://www.esri.ie/publications/carbon-taxation-in-ireland-distributional-effects-of-revenue-recycling-policies

state by carbon emissions. It is age dependant with older people receiving more than younger. It is paid from the amount of carbon tax gathered by the state[10].)

2.1 Concept 1 – Global Warming/Climate Change

Global warming[11] is the long-term rise in the average temperature of the Earth's climate system. The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report concluded, “It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.” The largest human influence has been the emission of greenhouse gases such as carbon dioxide, methane, and nitrous oxide.

The effects of global warming include rising sea levels, regional changes in precipitation, more frequent extreme weather events such as heat waves, and expansion of deserts.

Ireland’s Environmental Protection Agency (EPA) states; “The effects of global warming in Ireland are an increasing ferocity of storms and more water shortages in summer. Increased rainfall at other times will lead to more flooding which will have adverse effects on our water quality und puts coastal regions under severe threat of erosion. Climate change also threatens to diminish crop yields and will negatively impact our fishing industry. Changing weather patterns put our plants and animal species in danger.” [12]

Elsewhere rising sea levels may flood coastal infrastructure and force the abandonment of many coastal cities. Environmental impacts include the extinction or relocation of many species as their ecosystems change, most immediately the environments of coral reefs, mountains, and the Arctic.

Possible societal responses to global warming include mitigation by emissions reduction.

2.2 Concept 2 – The Commons

The commons[13] is the cultural and natural resources accessible to all members of a society, including natural materials such as air, water, and a habitable earth.

---

[10] Carbon taxes should be imposed at point of entry for fossil fuels or meat products entering the state and at the abattoir and peat production plant for meat and turf produced for resale in the state. Carbon taxes on airline fuel should be imposed at the ticket purchase point. (Meat that is exported will attract a rebate equal to all of the carbon tax once proof is provided that the meat has been delivered to a customer location which is outside of the state.)
[11] https://en.wikipedia.org/wiki/Global_warming; https://www.ipcc.ch/sr15/chapter/chapter-1/
[12] http://www.epa.ie/climate/communicatingclimatescience/whatisclimatechange/whatimpactwillclimatechangehaveforireland/; https://www.gsi.ie/en-ie/geoscience-topics/climate-change/Pages/Effect-in-Ireland.aspx
[13] https://en.wikipedia.org/wiki/Commons

As such any damage caused by some members of the society to the commons should result in compensation for those in society who did not cause the damage.

2.3 Concept 3 – Using a pricing mechanism to encourage behavioural change

To encourage behavioural change from the use of GHG emitting products to more sustainable ones, one way to do so is to introduce a carbon tax so that the price of GHG emitting products are more expensive than their sustainable, renewable equivalents.

As the Climate Change Advisory Council wrote in its 2019 review: “The carbon tax is a key policy tool for transition [and]The Council believes that it is essential that the revenue raised by the tax is used to ensure that those on low incomes are not adversely affected by the change.”[14]

It is on the basis of the above three concepts that the Green Party Carbon Dividend Scheme is formed.

Our policy mandates that the “polluter pays” principle must be invoked and the principle that those who do not pollute should be compensated.

While these principles also hold true for the planet and all its residents, this paper deals only with land which is the Irish state (the 26 counties of Ireland) and its legal residents.

Based on the aforementioned principles, all consumption of any item which results in GHG emissions, should be taxed. Such items include; fossil fuels, meat, plastics, cement, flights and so on (see also EPA Breakdown of Ireland’s Carbon Footprint attached to this document below).

[14] http://www.climatecouncil.ie/media/Climate%20Change%20Advisory%20Council%20Annual%20Review%202019.pdf

3 The Model

The current carbon tax in Ireland is €26 per tonne[15]. As there is no time to waste because of the climate emergency, it is proposed, once the database of legal residents[16] is available, to increase this as soon as possible but hopefully in year 1 of the administration to €100 per tonne, to €150 per tonne in year 2 and to €200 per tonne in year 3. This will give industry and affected interests some time to make necessary changes.

All carbon tax should, when collected, be redistributed to the legal residents.

All carbon tax should, where possible, be collected at the point of entry to the market, and the price increase which is imposed by that tax passed on to the consumer to bear.

We propose:

- That Carbon Dividend is defined as the amount of money which is to be given by the state to each legal resident as compensation for the climate change being caused in the state by carbon emissions by any party within the state against whom a carbon tax is levied.

- That such a distribution will be done on the basis of age – with the youngest residents receiving the least amount and older residents receiving a larger amount in a ratio which mirrors the current differential between contributory old age pension and employment benefit.

- That it is on the basis of carbon footprint of children being less that adults and therefore are given a smaller dividend than adults [In Ireland the number of children per family household is 1.38[17] and children represent an increase of 25% in the carbon footprint of a household[18]. On this basis each child represents about half the carbon footprint of an adult.] The ratio of dividend therefore is proposed as follows 1:2:2.4

[15] https://www.citizensinformation.ie/en/money_and_tax/tax/motor_carbon_other_taxes/carbon_tax.html
[16] For the purposes of this policy document, a legal resident is one who has a PPSN (https://www.revenue.ie/en/jobs-and-pensions/personal-public-service-number/index.aspx) and has an address and bank account in the Republic of Ireland
[17] https://www.cso.ie/en/releasesandpublications/ep/p-cp4hf/cp4hf/
[18] https://www.sciencedaily.com/releases/2020/04/200415152921.htm

Children under 18 years old	1
Adults over 18 years old and under 67 years old	2
Adults over 67	2.4

- That rural[19] residents receive more than urban. [Noting the costs of a carbon tax on rural houses is about 1.50 times that of urban houses and 37% of houses in Ireland are rural and 63% are urban according to the CSO.[20]]

In which case the children, adult and pensioner carbon dividends in rural and urban areas, when the carbon tax is €200 per tonne, will be:

		Population	Urban Pop.	Rural Pop.	Urban Payment	Rural Payment	Average Payment (€) p.a.	Cost (€) p.a.
Children under 18 years old	1	1,372,000	864,360	507,640	€386	€579	€457	€627,566,520
Adults over 18 years old and under 67 years old	2	2,940,000	1,852,200	1,087,800	€772	€1,158	€915	€2,689,570,800
Adults over 67	2.4	566,000	356,580	209,420	€926	€1,390	€1,098	€621,345,744
TOTALS		4,878,000	3,073,140	1,804,860				€3,938,483,064

- it is paid from the amounts of Carbon Tax gathered by the state[21].
- it is paid by means of a bank transfer and spread across the year in a frequency whereby no payment should be less than €100.
- to receive Carbon Dividend every resident should register their name, address, PPS number and the bank account where they require their Carbon Dividend be paid.

[19] the CSO definition of rural as being a dwelling in a settlement of less than 1,500 population: https://www.cso.ie/en/releasesandpublications/ep/p-cp1hii/cp1hii/bgn/
[20] https://www.cso.ie/en/releasesandpublications/ep/p-cp2tc/cp2pdm/
[21] We expect that carbon taxes will be imposed at point of entry for fossil fuels or meat products entering the state and at the abattoir and peat production plant for meat and turf produced for resale in the state. We expect that the distributors and retail sales chain will pass on these taxes to the consumer.

- Under 18s can be registered by their parents and their Carbon Dividend be paid to the parent/guardian who receives the child's Children's Allowance.

Under our proposal the Carbon Dividend compensates the legal resident for those cost increases, and for 70% of legal residents, the Carbon Dividend will exceed that extra cost[22].

We estimate that a Carbon Tax of €200 per tonne will collect approximately €4bn[23] which when distributed as per the above will mean a per annum payment to every resident as follows:

While the above will be the amount distributed to each legal resident of the state, the approximate cost / prices of fuel (as at June 2019) should Carbon Taxes be €200 per tonne can be calculated using the table provided in the government consultation document[24]:

Commodity	Typical Volume Sold	Average Retail Price (incl €20 Carbon Tax)[1]	Price with Carbon Tax @€40[2]	Price with Carbon Tax @€80[2]
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

When calculated, the price of each of the above should Carbon Tax be €200 per tonne will be:

- Petrol - €117.57 for 60 litres or €1.96 per litre
- Diesel - €115.89 for 60 litres or €1.93 per litre
- Kerosene - €1159.38 for 900 litres or €1.29 per litre

---

[22] https://www.esri.ie/publications/carbon-taxation-in-ireland-distributional-effects-of-revenue-recycling-policies
[23] As stated on page 3 of the document (https://assets.gov.ie/9384/b078dbb6c7614c748b897ba01b481532.pdf) 'receipts of €440m are forecast in 2019' when current carbon tax rate is €20 per tonne. Therefore should the rate be €200 per tonne the income should be 10 times this or €4400m, but allowing for the ODA 10% we have taken €3960m.
[24] Page 4: https://www.gov.ie/en/consultation/63e493-consultation-on-the-options-for-the-use-of-revenues-raised-from-incr/

- Coal - €40.17 for 40kg or €1 per kg
- Turf - €9.18 for 12.5kg or 73c per kg

And for electricity, the average household bill is €1035[25] which is the current price for 4,200kwh.

Therefore, the increase if the carbon tax is applied to this will depend on the fuel being used. If natural gas is used to generate the electricity then each kW will produce .2kg, if peat then .4kg. So the average electricity bill will increase by 4.2 X .4 X €200 = €336p.a. if peat used, and if natural gas is use the increase p.a. will be €168 p.a., but if renewables such as wood, miscanthus, willow, hemp are used then no increase will occur.[26]

[25] http://www.moneyguideireland.com/much-average-electricity-bill.html
[26] https://www.volker-quaschning.de/datserv/CO2-spez/index_e.php

4 Conclusion

Carbon tax is a way to change consumer and business behaviour in order to reach our targets of 50% reduction by 2030 and net zero by 2050[27].

Those who are negatively affected by carbon emission and who are not big polluters will be compensated by the Carbon Dividend.

Green Party policies for sectors such as Agriculture, Energy and Transport, will provide the alternative mechanisms for those who wish to stop polluting such as rewards for environmentally sound land use, cheaper and more available renewable energy and better cheaper public transport an availability of electric scooters cars and bikes.

As a country, Ireland, has committed to the UN global plan to address the climate emergency, to do any less is irresponsible, and by the Carbon Dividend Scheme we are demonstrating that addressing climate change does not need to be any more expensive on business and consumer, but responsible choices must be made to do so. By contributing 0.7% GNI aid to the rest of the world for climate adaptation measures we are providing the industrialised world with an example to be followed to help developing countries mitigate the effects of climate change.

[27] One of the motions passed at Green Party Policy Council Meeting 18th April 2020 was "That the party will target the reduction of greenhouse gas emissions to net-zero by 2030 in all of its policy efforts." The model supplied here enables government to increase or decrease the carbon tax per tonne to achieve this target.