

Energy & Environmental Taxes

Introduction

1. This paper focuses on issues surrounding the carbon tax including its implementation which is ongoing and also examines possible increases in the carbon tax rate. In addition, the paper considers possible changes to the excise duties on energy products as an alternative to increasing the carbon tax. The format of the paper is as follows:
 - A. The implementation of the carbon tax and its application to solid fuels
 - B. Carbon tax and reliefs.
 - C. Options for increasing the carbon tax rate
 - D. Options for increasing excise duties on energy products.
 - E. Other issues for consideration.

A. The implementation of the carbon tax and its application to solid fuels

2. Budget 2010 introduced a carbon tax on fossil fuels. As illustrated in the table below, the carbon tax was intended to be implemented in three phases. The yield is expected to be around €330 million (incl. VAT) in 2011. The key outstanding issue in relation to the implementation of the tax is its application to solid fuels i.e. coal and peat.

Products	Date Introduced	2010 Yield (VAT Inclusive) € million (a)
Petrol and auto- diesel	10 Dec 2009	179
Kerosene, marked gas oil (green diesel), liquid petroleum gas (LPG) fuel oil and natural gas	1 May 2010	67
Coal & Commercial Peat	Subject to Commencement Order	Nil
TOTAL		246

3. The section in the Finance Act 2010 that provides for application of the carbon tax to solid fuels (coal and commercial peat) is subject to a Ministerial Commencement Order. This approach was primarily adopted in order to allow time for a robust mechanism to be put in place to improve the control of high sulphur coal being sourced from Northern Ireland suppliers.
4. The Department of the Environment undertook to provide such a robust mechanism in conjunction with the National Standards Authority of Ireland (NSAI). As part of that exercise the Department of Environment in conjunction with the NSAI consulted with a Stakeholder Working Group, which included officials from the Department of Finance, the Revenue Commissioners, the industry representative Solid Fuel Trade Group (SFTG), the Environmental Protection Agency and representatives of selected Local Authorities.

5. The Minister for the Environment advised that he has introduced a new specification for the sulphur content of bituminous coal placed on the market for residential use in Ireland with effect from 7 June 2011.
6. This creates the circumstances to facilitate the matter of applying the carbon tax to coal and peat. This will mean an increase in the price of those fuels which, based on current prices, will be €1.79 or around 12% in the case of coal and 39 cents or around 10% in the case of briquettes. The higher percentage increase in the price of these products, including the other heating oils, is due in part to those products having little or no excise applied to them prior to the carbon tax, unlike for example petrol and auto-diesel. It should also be noted that coal and peat have the highest carbon content of all fossil fuels and as such a higher carbon tax will apply as a result. (See Annex I for the impact of the carbon tax on coal and peat).

Fuel Poverty

7. In the context of domestic heating provision, the carbon tax is intended to apply to all types of coal and commercial peat. This is likely to raise further concerns about the impact on those who rely on solid fuels for their main heating provision and there is the potential for increase in fuel poverty for this group. According to the ESRI, low income households in Ireland usually make more extensive use of cheaper but more carbon intensive fuels, such as coal and turf. The implementation of the carbon tax would increase the cost of a 40kg bag of coal by €1.79 (13%) and a bale of briquettes by 39 cents (10%). The issue of fuel poverty and energy poverty is being addressed through the Energy Affordability Strategy which aims to tackle energy affordability in Ireland through a combination of institutional supports, investments in improving the energy efficiency of housing stock and wide availability of advice on energy efficiency. In a decision of 14th September the Government agreed to publish the Strategy with a view to its implementation.

Yield

8. Applying the carbon tax to solid fuels would yield approximately €20 million in a full year.

B. Reliefs from the carbon tax

9. As a matter of principle the reliefs from the carbon tax are limited to ensure as wide an application as possible. The reliefs that currently apply are set out in the table below.

Current reliefs from the carbon tax

Relief	Rationale
<i>Relief for Fuel used for generation of electricity</i>	<i>Required to comply with EU Energy Tax Directive. Ensures no price increases in electricity arising from carbon tax. Emissions from powergen fall under EU Emission Trading Scheme (ETS)</i>
<i>Relief for participants in the EU ETS</i>	<i>The EU ETS is considered the appropriate carbon pricing mechanism for large scale installations. On that basis reliefs apply to ETS participants subject to the EU minimum rates being observed.</i>

<i>Biofuels</i>	<i>Exemption intended to promote a higher incidence of biofuel in conventional transport fuel sales.</i>
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The following requests for relief from carbon tax made by a number of sectors are set out below for consideration.

(i) Treatment of Combined heat and Power (CHP)

- 10. Combined Heat and Power, or CHP as it is more commonly referred to, is the simultaneous generation of usable heat and power (electricity) in a single process. The heat produced in electricity generation is utilised rather than releasing it into the atmosphere. CHP is sometimes referred to as co-generation or cogen. A relief from carbon taxation has been sought by CHP Ireland and several CHP operators.
- 11. There is a clear distinction in the EU Energy Tax Directive (ETD) between the tax treatment of electricity generation and CHP.

Article 14(1)(a) of the ETD establishes a mandatory relief for "*energy products and electricity used to produce electricity*". Article 15(1)(c) on the other hand gives Member States discretion to allow total or partial relief for "*energy products and electricity used for combined heat and power generation*".

- 12. While CHP interests contend that CHP is a form of electricity production and is accordingly entitled to a (mandatory) relief from taxation of the fuel used to produce it, the ETD makes it clear that it is a matter for the Member State to decide whether, and to what extent, it will allow relief on such fuel usage. It should be noted that the carbon tax has a broad base and it would be undesirable to undermine that principle. The long-term impact of the carbon tax will be to incentivise energy efficient processes. A concession here is estimated at around €2.3m per annum.

(ii) Treatment of Mineralogical Processes

- 13. Currently fuels used in the cement sector are effectively exempt from excise duty. At the time of the introduction of the carbon tax in early 2010 the cement sector strongly lobbied for a continued full exemption. Under the Finance Bill 2010, cement manufacture and mineralogical processes in general, qualify for the *partial* relief from carbon tax on natural gas and solid fuel as installations within the EU Emissions Trading System (ETS). However, this means that the current legislation provides that, outside the electricity production sector, the EU minimum excise rate under the Energy Tax Directive (ETD) should apply, even where a firm is within the ETS. Essentially, a full relief from carbon taxation has been sought for fuels used for the manufacture of cement. The precedent of the previous full relief from tax on coal used for mineralogical processes (which include cement manufacture) has been quoted¹. Sustainable Energy Authority Ireland estimate that of the total fuel usage for

¹ Coal was in the tax net prior to the introduction of the carbon tax but large scale exemptions were availed of – including one relating to mineralogical processes - which also benefitted the cement manufacturers; the introduction of the carbon charge did not require the previously-held exemption to be maintained .

mineralogical processes in 2009, approx 64% was coal, 13%, natural gas and 24% mineral oil.

14. The ETD provides that certain uses of energy products, including use for mineralogical processes, are excluded from the scope of that Directive. Mineralogical processes are deemed to include the manufacture of cement, ceramics, bricks, tiles, gypsum and periclase (a particular concern for Ireland when the ETD was discussed at EU level).
15. Exclusion from the scope of the ETD means that Member States may tax these products, or exempt them from tax, as they see fit, subject to State Aid requirements. Exemptions would however have to be *justified by the nature or general scheme of the system*. It follows that a concession here would have to be extended across a wider area for consistency purposes – this could mean that some sectors already paying a carbon charge would be exempted in future e.g. waste incineration. The impact of non-exemption on competitiveness, domestic and international, and on employment in the sector has been stressed by the cement firms. The cost of a relief here is estimated at €1.25m per annum.

(iii) Waste Incineration – Pharmaceuticals Industries

16. Waste incineration is excluded from the ETS scheme because of the complexity of measuring the CO₂ content of the material involved. This means where ETS participants have incineration activity at their plant, the fuel used for such activity is not exempted from the carbon charge. Full relief for incineration has been sought by Pharmaceuticals Ireland, an IBEC representative body for that sector. If a relief were granted for mineralogical processes, industrial waste incineration would be the only known "dual use" with no relief from carbon taxation; "dual use" is also excluded from the scope of the ETD. It is estimated that a relief here would be approx €0.5m.

(iv) Relief for 'farm' or 'agricultural diesel' from further carbon tax increases.

17. In respect of any potential increase in the carbon tax, it should be noted that the Programme for Government states "*We will exempt farm diesel from further increases in the carbon tax*". It must be borne in mind that "farm diesel" is in fact Marked Gas Oil (MGO) which is used for a number of purposes including farm or agricultural diesel, fuel for other off-road machinery, fuel for trains, household heating fuel etc. The end use of MGO cannot be determined at the time of release from the tax warehouse. Having a separate tax regime for farm diesel would pose significant difficulties. In practice the only way in which farmers could be relieved from further carbon tax increases on MGO would be through a repayments system in which they would claim back amounts corresponding to the additional carbon tax. This would give rise to a very significant volume of repayment claims and would present difficulties for Revenue at a time when resources are under pressure. This is apart from the need for checking and verification that would be necessary with such a system in order to avoid any potential abuse. Furthermore, a relief for a specific sector would lead to 'knock on' claims from other sectors.

C. Options for increasing the Carbon Tax rate

18. Potential rates for a carbon tax are set out in Annexes I and II with an estimated impact the rate will have on the price of those products affected and the potential revenue yields that may accrue. It estimates the impact of an increase in the carbon tax rate of €5 per tonne and €10 per tonne on products to which the carbon tax already applies.
19. A €5 increase in the carbon tax rate, applying to petrol and auto-diesel with effect from Budget night and a 1 May 2012 implementation date for other fuels would yield approximately €90 million in 2012 and around €120 million in a full year based on the assumption it was applied to all fuels, including solid fuels.

D. Increasing excise rates as an alternative to increasing the carbon tax

20. An alternative to increasing the carbon tax rate which would impact all fossil fuels would be to increase the rate of excise duty for individual products. Given the sensitivities that may accompany increasing the home-heating oils and natural gas during the winter season, a possibility would be to increase the excise rates on petrol and auto-diesel. Moreover, petrol and auto-diesel have by far the highest revenue raising potential whether it is through either the carbon tax or the excise route.

Excise duty levels of Motor Fuels

21. It should be noted, however, that excise duties on motor fuels have been increased in the last the four Budgets, as illustrated in the table below with petrol being increased by 16.2 cents and auto-diesel by 11.9 cents (VAT inclusive). Ireland currently has the 11th highest petrol rate and the 5th highest auto-diesel rate in the EU 27. (See Annex III for a full comparison)

Budgetary Excise Changes on Motor Fuels (VAT inclusive) since 2007		
Budget	Petrol	Diesel
2007	no change	no change
2008	no change	no change
2009 (emergency and supplementary)	increased by 8 cent (Oct. 08)	increased by 5 cent (Apr. 09)
2010 (via carbon tax)	Increased by 4.2 cents	Increased by 4.9 cents
2011	Increased by 4 cents	Increased by 2 cents

Price Levels of Motor Fuels

22. The retail prices of motor fuels over the 12 month period to October 2011 are illustrated below. Prices rose steadily and peaked in May with a slight decline in recent months. Ireland, as with other countries, has experienced an increase in the cost of petrol and auto-diesel. Fuel prices are driven by a number of factors including the price of oil on international markets, exchange rates, production costs and refining costs. The rise in oil prices over recent periods reflected additional factors such as geopolitical uncertainty in Northern Africa and the Middle East with potential supply disruptions. However, the price of oil has decreased somewhat relative to highs earlier

in the year, on the 5 October 2011 the price of a barrel of oil was \$101.2 compared to a the year of high of \$125.89 in April 2011.

Prices per Litre in Motor Fuels; October 2010 to October 2011

	Petrol Price Cent	Diesel Prices Cent
Oct 2010	131.2	124.4
Nov 2010	131.3	125.0
Dec 2010	140.6	132.8
Jan 2011	143.5	135.9
Feb 2011	145.1	138.3
Mar 2011	149.7	144.6
Apr 2011	150.7	146.3
May 2011	153.2	145.6
June 2011	150.8	142.7
July 2011	149.3	141.4
Aug 2011	150.8	142.2
Sep 2011	149.7	141.9
Oct 2011	149.9	143.9

Sources: CSO (Oct 2010 – July 2011), AA (Aug 2011) & www.Pumps.ie (Sep & Oct 2011)

23. As can be seen from the table below, fairly moderate increases in the excise on petrol and auto-diesel could achieve around the same revenue as a €5 per tonne increase in the carbon tax. For example, a full year yield of close to €120² million is possible from a €5 per tonne rate increase in the carbon tax. Around the same level of revenue could be achieved by increasing motor fuels by 3 cents each. Options for increasing the excise rates for petrol and auto-diesel are set out in the table below:

Yield from Excise Increases

Increase (VAT inclusive) Per litre	Petrol		Auto-diesel	
	Cost / Yield €m	CPI Effect %	Cost / Yield €m	CPI Effect %
+2c	33.2	0.050	39.5	0.013
+3c	49.6	0.0745	59.1	0.019
+4c	66.0	0.099	78.7	0.025
+5c	82.3	0.124	98.2	0.032
+6c	98.5	0.149	117.7	0.038
+8c	130.9	0.198	156.5	0.051
+10	163.1	0.248	195.0	0.064

Cross-Border Implications

² Assumes carbon tax is applied to all fuels including solid fuels

24. While there has been much attention in the recent years concerning North-South price differentials and the incentive for consumers to head North, the situation with fuels is somewhat different. The UK, over the past ten years or more, has adopted a policy approach of high excise rates on transport fuels (now having the highest excise rates in the EU, considerably so in the case of diesel). Lower excise taxes in the South brought considerable business here with current estimates of between 6% and 8% of petrol, and between 8% and 10% of diesel, being purchased in the State but used out of State. These fuel purchases are reported in the inventory of transport emissions for the State.
25. The table below (as of 7 September 2011) shows that petrol prices are around 11 cents cheaper per litre whereas auto-diesel is around 22 cents per litre cheaper in the State. Any increase in the carbon tax or excise duty, or a further weakening of Sterling, would of course reduce these differentials.

Cross Border Comparisons (Rates in €)

Product	ROI Price	N.I. Price	Price Differential	ROI Excise & CT	N.I. Excise	Excise Differential
Petrol (litre)	1.50	1.61	-0.11	0.58	0.67	-0.09
Auto- diesel (litre)	1.44	1.66	-0.22	0.47	0.67	-0.20

N.I. average prices from www.petrolprices.com; ROI average prices from www.pumps.ie; UK excise rate for petrol and auto-diesel £0.5795 per litre, ECB exchange rate on 4 October 2011: 0.085960

E Other Issues for consideration

Proposal to increase excise on High Sulphur Marked Gas Oil

26. It is understood that an issue regarding the price differential between high and low sulphur grade marked gas oil (MGO) has been flagged by the Department of Environment, Community and Local Government and that a suggestion has been made that the excise on high sulphur grade MGO be increased to bring the price into line with that of low sulphur grade gas oil.
27. This follows from a recent amendment to the Fuel Quality Directive which places an obligation on distributors to supply a low sulphur grade of MGO to end users if the fuel is intended for use in non-road mobile machinery e.g. tractors, generators, fork lifts etc., while high sulphur MGO can continue to be used for heating and marine purposes.
28. There is a price differential of approximately two to three cent per litre between the high and low sulphur grades of MGO. The extra cost is associated with refining the fuel to the lower sulphur specification. Since the introduction of the new requirement the Department of Environment, Community and Local Government has received representations that many distributors have ignored the new Regulations and continue to sell only high sulphur MGO to end users and, due to its lower price per litre, are under-cutting compliant distributors.

29. Having considered a number of options to overcome this problem, the Department of Environment, Community and Local Government is suggesting that an increase in the excise of the high sulphur grade of MGO in order to remove the price differential would be their preferred option.
30. Increasing the excise duty payable on high sulphur MGO will result in persons who buy MGO for home/industrial heating purposes paying 3.4 cents (VAT inclusive) extra per litre for their fuel.

Breakdown of MGO use by Sector

Sector	Ktoe ³	% of MGO used	Example of use
Industrial	160	14%	Drying processes/off-road machinery
Residential	206	19%	Home heating
Commercial Services	313	28%	Heating of commercial buildings/ off-road machinery
Transport (Rail)	40	4%	Trains
Public Services	161	15%	Heating of commercial buildings
Agriculture	226	20%	Agricultural machinery
Total	1106	100%	

(Source: SEAI Energy Balance 2010)

Essential User Fuel Rebate – proposal by the Irish Road Hauliers’ Association (IRHA)

31. The IRHA are opposed to any increase in the taxation of auto-diesel, indeed, the IRHA has asked that consideration be given to an excise rebate scheme (20c per litre of diesel) for the haulage business. The IRHA argues that the cost of diesel is huge for the industry typically accounting for 35% of turnover. The scheme would apply to licensed, tax-compliant hauliers buying fuel in Ireland. The IRHA estimates that the cost of such a scheme could be up to €169 million per annum.
32. It is important to point out that the 20c per litre rebate being sought by the IRHA is not possible under EU legislation – under the Energy Tax Directive we would not be permitted to go below the EU minimum rate of 33c of excise per litre of diesel.

October 2011

³ Kilo tonnes of oil equivalent

Solid Fuels: Illustrative impact of introduction of carbon tax and possible increases

			Carbon Tax @ €15			Carbon Tax @ €20			Carbon Tax @ €25		
Fuel Type	Unit	Current Price	Carbon Tax @ €15	% change in price	Revenue (VAT incl.) €m	Carbon Tax @ €20	% change in price	Revenue (VAT incl.) €m	Carbon Tax @ €25	% change in price	Revenue (VAT incl.) €m
Peat Briquettes	Bale	3.90	39 cents	10.0%	6	52 cents	13.3%	8.5	65 cents	16.6%	11
Coal	40kg	14.60	1.79	12.3%	15	€2.39	16.3%	21.5	€2.99	20.5%	28
Total					21			31			39

**Illustrative Impact of possible carbon tax increases
on oils and gas**

Estimate for €5 per tonne increase in the carbon tax					
Fuel Type	Unit	Current Price €	Carbon Tax increase (VAT incl.)	% change in price	Revenue Yield In a Full Year (VAT incl.) €m
Petrol	Litre	1.499	1.4 cents	0.93%	23
Auto-diesel	Litre	1.439	1.6 cents	1.14%	32
Kerosene	1,000 Litres	820.00	€14.40	1.76%	18
Marked Gas Oil	1,000 Litres	857.00	€15.58	1.82%	17
LPG	1,000 Litres	910.00	€9.33	1.03%	1
Fuel Oil	1,000 Litres	900.00	€17.52	1.95%	0.5
Natural Gas	13,750 kwh ⁴	746.90	€14.46	1.9%	17
Total					108.5

Estimate for €10 per tonne increase in the carbon tax					
Fuel Type	Unit	Current Price €	Carbon Tax increase (VAT incl.)	% change in price	Revenue Yield In a Full Year (VAT incl.) €m
Petrol	Litre	1.499	2.8 cents	1.87%	46
Auto-diesel	Litre	1.439	3.2 cents	2.26%	64
Kerosene	1,000 Litres	820.00	€28.79	3.51%	35
Marked Gas Oil	1,000 Litres	857.00	€31.17	3.64%	35
LPG	1,000 Litres	910.00	€18.65	2.05%	2.6
Fuel Oil	1,000 Litres	900.00	€35.05	3.89%	0.9
Natural Gas	13,750 kwh ⁵	746.90	€28.92	3.57%	34
Total					217.5

⁴ Average annual household consumption

⁵ Average annual household consumption

**Comparison of Excise Tax Rates for
Petrol and Diesel in EU Member States**

Unleaded Petrol			Diesel	
Member State	€ per 1,000 Litres		Member State	€ per 1,000 Litres
Netherlands	718.27	1	UK *	674.15
UK *	674.15	2	Sweden	492.61
Greece	670.00	3	Italy	472.20
Germany	654.50	4	Germany	470.40
Finland	627.00	5	Ireland	465.70
Belgium	613.57	6	Czech Republic	448.40
Italy	613.20	7	Belgium	432.89
France	606.90	8	France	428.40
Sweden	596.64	9	Austria	425.00
Portugal	582.95	10	Netherlands	423.60
Ireland	576.22	11	Greece	412.00
Denmark	576.20	12	Estonia	392.92
Slovakia	550.52	13	Denmark	392.76
Czech Republic	525.80	14	Slovakia	386.40
Austria	515.00	15	Malta	382.40
Malta	469.39	16	Portugal	364.41
Luxembourg	462.09	17	Finland	364.00
Hungary	438.20	18	Hungary	355.49
Lithuania	434.43	19	Slovenia	351.16
Spain	424.69	20	Spain	331.00
Estonia	422.77	21	Cyprus	330.00
Poland	421.69	22	Latvia	329.67
Slovenia	417.14	23	Poland	327.11
Latvia	407.16	24	Luxembourg	320.00
Bulgaria	363.02	25	Bulgaria	314.45
Romania	359.59	26	Romania	302.51
Cyprus	359.00	27	Lithuania	302.07
EU Average (27)	521.48		EU Average (27)	395.99
EU Average (15)	594.09		EU Average (15)	431.00
EU Minimum Rate	359.00		EU Minimum Rate	330.00

Source: EU Excise Duty Table July 2011

* UK Exchange Rate taken as €1 = £0.85960 (ECB, 4 October 2011)