

## Energy & Environmental Taxes

### Introduction

1. This paper focuses on issues surrounding the carbon tax including its implementation which is ongoing. The paper also examines 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
- b) The introduction of the carbon tax on solid fuels and related issues
- c) Options for increasing the carbon tax rate
- d) Options for increasing excise duties on energy products.

### A. The implementation of the carbon tax

2. Budget 2010 introduced a carbon tax on fossil fuels in line with the Renewed Programme for Government. The impact of the €15 per tonne carbon tax as set out in the Budget book last year is reproduced in Annex 1. As the Table below shows the carbon tax is now well embedded for the main products impacted by the tax which are petrol, diesel, home heating oil and natural gas. The yield from the carbon charge (inclusive of VAT) will start to grow considerably as we head into the winter months. While this is a positive for the Exchequer, the incidence of the carbon charge will now become more visible and may have some bearing on how best to proceed in this area for Budget 2011. The key outstanding issue is the application of the tax to coal and peat.

<b>The Carbon Tax: What it applies to, dates introduced &amp; Yield data</b>			
<b>Products</b>	<b>Date Introduced</b>	<b>Yield to date (end Sept. 2010) (VAT Inclusive) € million (a)</b>	<b>Yield in a full year when CT fully implemented at current €15 rate (VAT Inclusive) € million</b>
Petrol and auto- diesel	10 Dec 2009	132.2	167
Kerosene, marked gas oil (green diesel), liquid petroleum gas (LPG) fuel oil and natural gas	1 May 2010	30.0	142
Coal & Commercial Peat	Subject to Commencemen t Order	Nil	21
<b>TOTAL</b>		<b>162.2</b>	<b>330</b>

(a) The projected yield in 2010 at Budget time was €250m.

3. It was a policy decision that the carbon tax should have wide application and consequently reliefs have been kept to a minimum. The reliefs that are in place are outlined below.

## Main Reliefs in Place & Reasons for them

<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>

## Request for Exemptions from the Carbon Tax

4. Requests for exemption from carbon tax have been made by a number of sectors. Some of the more pertinent ones are outlined below.

5. (i) 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.

6. 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*".

7. 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 full concession here is estimated at around €2.3m per annum.

8. (ii) Favourable treatment continues to be sought for companies that are engaged in emission reduction agreement with Sustainable Energy Authority of Ireland (SEAI). However, currently engagement by sectors or companies with SEAI is on a voluntary basis – the clamour for this concession initially was around companies that had legally binding agreements but no such thing exists with SEAI. Assistance from SEAI to industry in the form of energy efficient advice and training constitutes an appropriate State supported initiative as is. To go beyond this through expanding exemptions to business sectors would in time result in a carbon tax that was predominantly payable by households.

9. (iii) A full relief from carbon taxation has been sought for fuels used for the manufacture of cement. The precedent of the full relief from mineral oil tax for coal used for mineralogical processes (which include cement manufacture) has been quoted<sup>1</sup>. Cement manufacture, and mineralogical processes in general, already qualify for the *partial* relief from Natural Gas Carbon Tax and Solid Fuel Carbon Tax for installations within ETS. SEAI estimate that of the total fuel usage for mineralogical processes in 2009, approx 64% was coal, 13%, natural gas and 24% mineral oil.

10. 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 in the EU level).

11. 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 have to be *justified by the nature or general scheme of the system* as per Council minutes attached to the ETD. It follows that a concession here may 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. The cost of a relief here is estimated at €1.25m per annum.

12. (iv) Waste incineration is excluded from the EU ETS scheme because of the complexity of measuring the CO<sub>2</sub> 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. It is estimated that a relief here would be approx €0.5m.

## **B. The Implementation of the Carbon Tax on Solid Fuels**

13. 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.

14. The Department of Environment in conjunction with the National Standards Authority of Ireland (NSAI) have proposed a labelling environmental protection system for coal which would effectively extend the existing voluntary agreement for low sulphur coal to the entire State on a compulsory regulatory basis.

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<sup>1</sup> 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 .

15. A stakeholder committee is being established with the aim of reaching agreement by the end of this year. Under EU law dealing with technical barriers to trade, Ireland is required to notify the European Commission of all draft technical regulations concerning products before they are adopted in national law. Formal notification of the proposed new standard for coal will issue from NSAI to the EU Commission, to which the Commission will have three months to respond. Consequently, it may be preferable to consider for the Finance Bill the insertion of a date upon which the carbon tax on solid fuels will apply, in reality the impact will only come into effect from the beginning of winter 2011.

### C. Options for increasing the Carbon Tax rate

16. Potential rates for a carbon tax are set out in Annex 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. It also sets out the impact on solid fuels of the €15 per tonne rate (yet to apply) and increases of €5 and €10 on top of that rate.

### D. Increasing Excise Rates as an alternative to increasing the Carbon Tax

17. 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. 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	35.1	0.050	38.6	0.012
+3c	52.4	0.075	57.8	0.018
+4c	69.7	0.100	76.9	0.024
+5c	86.9	0.125	96.0	0.031
+6c	104.0	0.150	115.0	0.037
+8c	138.1	0.200	152.8	0.049
+10	172.1	0.250	190.3	0.061

18. As can be seen from the table, 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. Of course, an option that takes a combination of both approaches is also possible. For example a full year yield of close to €200m is possible from a €5 per tonne rate increase in

the carbon tax and a further four cent excise increase in MOT on petrol (the approximate €200m<sup>2</sup> yield assumes that solid fuels are taxed at the full €20 rate for winter 2011). This would be a 5 cent increase on petrol and would reduce considerably the differential compared with NI detailed below.

19. Ireland's tax rate on petrol is the eleventh highest in the EU 27 and third highest in respect of auto-diesel. Consequently there is more scope for increasing the petrol rate. (EU rates detailed in Annex III). Furthermore, the situation with diesel is more sensitive given the reliance of the commercial sector.

### **Cross-Border Implications of a Carbon Tax**

20. 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 estimates of between 5% and 9% of petrol, and 17% in 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.

21. Price differentials narrowed significantly at the end of last year and the beginning of this year almost reaching parity at one point. This was due to Excise increases in petrol (8 cent), diesel (5 cent) and the introduction of the carbon tax over last three Budgets respectively together with the weakness of Sterling. At present, notwithstanding a recent strengthening of the Euro, transport fuel continues to be cheaper in the State. In addition the UK has announced a 2.5 percentage point increase in its standard VAT rate from 1 January 2011. The table below (as of 14 October 2010) shows that petrol prices are around 7 cents cheaper per litre whereas auto-diesel is around 15 cents per litre cheaper in the State. Any increase in the carbon tax, 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
<b>Petrol</b> (litre)	1.299	1.372	-0.073	0.54	0.66	-0.12
<b>Auto- diesel</b> (litre)	1.249	1.406	-0.157	0.45	0.66	-0.21

### **Fuel Poverty**

22. The Minister in his Budget speech last year indicated that the revenue from the carbon tax would, amongst other things, be used to boost energy efficiency, to support rural transport and to alleviate fuel poverty. It is generally acknowledged that some low income households tend to be more dependent on solid fuels such as coal and peat, and the carbon tax has yet to be applied to those products.

<sup>2</sup> €107m from oil and gas, €70m from petrol excise increase, €15m from 6 month yield for solid fuels

23. The approach of enhancing welfare supports, particularly at a time when all expenditures have to be tightly controlled and reduced, is problematic. It is considered that a targeted approach is more appropriate than simply increasing cash supports for home fuel purchase. The concomitant provision of capital grants to retrofit our housing stock - a programme which has an emphasis on low income housing - and increased cash transfers through the National Fuel Scheme is not a compatible policy approach. More energy efficient homes have considerably lower fuels bills. Therefore, an appropriate balance would need to be struck between existing welfare supports and energy efficiency based programmes and effective targeting of supports and assistance towards people experiencing fuel poverty.

**October 2010**

## ANNEX E

Main Features of the Carbon Tax

Rate of €15 per tonne of carbon		
Categories	Specific Products	Implementation Date
Transport Fuels	Petrol and Auto-diesel	10 December 2009
Non-transport fuels (oil and gas)	Kerosene, Marked Gas Oil, Fuel Oil, Liquid Petroleum Gas (LPG) and Natural Gas	1 May 2010
Solid Fuels	Coal and Commercial Peat	Subject to a Commencement Order

- Exemption from the carbon tax will apply only to participants in the EU Emissions Trading Scheme (ETS) in respect of fuels so covered. On that basis, electricity is not subject to the carbon tax.
- Based on studies carried out by the ESRI, the overall direct impact on households will be between €2 and €3 per week.
- Measures are being put in place aimed at improving energy efficiency in low-income households, particularly those dependent on solid fuels.
- The tax is estimated to yield €330m in a full year and €250m in 2010 (CPI impact around 0.35% in a full year).
- Accounting and payment of the carbon tax in respect of transport fuels will be required to be made by the 15<sup>th</sup> day of the following month.
- Further details on the carbon tax will be contained in the Finance Bill and consultation with relevant sectors will commence immediately.

The impact on individual fuels in terms of nominal and percentage price changes is illustrated below:

Fuel Type	Unit	Current Price €	Carbon Tax @ €15 (VAT incl.)	% change in price	Revenue Yield In a Full Year (VAT incl.) €m
<b>Petrol</b>	Litre	1.19	4.2 cents	3.5%	75
<b>Auto-diesel</b>	Litre	1.10	4.9 cents	4.4%	92
<b>Kerosene</b>	1,000 Litres	516	€43.14	8.4%	47
<b>Marked Gas Oil</b>	1,000 Litres	539	€46.87	8.7%	43
<b>LPG</b>	1,000 Litres	720	€27.97	3.9%	4
<b>Fuel Oil</b>	1,000 Litres	600	€52.15	8.7%	1
<b>Natural Gas</b>	13,750 kWh <sup>3</sup>	800	€47.86	6.0%	47
<b>Peat Briquettes</b>	Bale	3.85	39 cents	10.1%	6
<b>Coal</b>	40kg	16.20	€1.79	11.1%	15
<b>Total Yield</b>					<b>€330m</b>

<sup>3</sup> Average annual household consumption

**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
<b>Petrol</b>	Litre	1.30	1.4 cents	1.1%	24.3
<b>Auto-diesel</b>	Litre	1.25	1.6 cents	1.3%	31.1
<b>Kerosene</b>	1,000 Litres	661.00	€14.34	2.2%	18.0
<b>Marked Gas Oil</b>	1,000 Litres	707.70	€15.60	2.2%	17.7
<b>LPG</b>	1,000 Litres	750.00	€9.35	1.2%	1.3
<b>Fuel Oil</b>	1,000 Litres	694.00	€17.52	2.5%	0.4
<b>Natural Gas</b>	13,750 kwh <sup>4</sup>	962.50	€14.42	1.5%	15.0
<b>Total</b>					<b>107.8</b>

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
<b>Petrol</b>	Litre	1.30	2.8 cents	2.1%	48.0
<b>Auto-diesel</b>	Litre	1.25	3.2 cents	2.6%	62.0
<b>Kerosene</b>	1,000 Litres	661.00	€28.68	4.3%	35.9
<b>Marked Gas Oil</b>	1,000 Litres	707.70	€31.20	4.4%	35.5
<b>LPG</b>	1,000 Litres	750.00	€18.70	2.5%	2.5
<b>Fuel Oil</b>	1,000 Litres	694.00	€35.05	5%	0.8
<b>Natural Gas</b>	13,750 kwh <sup>5</sup>	962.50	€28.84	3%	30.0
<b>Total</b>					<b>214.8</b>

<sup>4</sup> Average annual household consumption

<sup>5</sup> Average annual household consumption



### Solid Fuels: 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	3.85	39 cents	10.1%	7	52 cents	13.5%	9.9	65 cents	16.9%	12.4
Coal	40kg	15.20	1.79	11.8%	15	€2.39	15.7%	20.1	€2.99	19.7%	25.1
<b>Total</b>					<b>22</b>			<b>30</b>			<b>37.4</b>

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

<b>Unleaded Petrol</b>			<b>Diesel</b>	
<b>Member State</b>	<b>€ per 1,000 Litres</b>		<b>Member State</b>	<b>€ per 1,000 Litres</b>
Netherlands	713.99	<b>1</b>	UK	649.00
Greece	670.00	<b>2</b>	Germany	470.40
Germany	654.50	<b>3</b>	<b>Ireland</b>	<b>449.18</b>
UK	649.00	<b>4</b>	Czech Republic	430.76
Finland	627.00	<b>5</b>	France	428.40
Belgium	613.57	<b>6</b>	Slovenia	427.00
France	606.90	<b>7</b>	Sweden	425.46
Portugal	582.95	<b>8</b>	Italy	423.00
Denmark	566.70	<b>9</b>	Netherlands	421.07
Italy	564.00	<b>10</b>	Greece	412.00
<b>Ireland</b>	<b>543.17</b>	<b>11</b>	Estonia	392.93
Sweden	539.80	<b>12</b>	Belgium	392.89
Slovakia	514.50	<b>13</b>	Denmark	386.17
Czech Republic	505.11	<b>14</b>	Austria	375.00
Slovenia	484.51	<b>15</b>	Slovakia	368.00
Austria	475.00	<b>16</b>	Portugal	364.41
Luxembourg	462.09	<b>17</b>	Finland	364.00
Malta	459.38	<b>18</b>	Hungary	360.21
Hungary	444.02	<b>19</b>	Malta	352.40
Lithuania	434.43	<b>20</b>	Spain	331.00
Spain	424.69	<b>21</b>	Latvia	330.37
Estonia	422.77	<b>22</b>	Cyprus	330.00
Poland	390.55	<b>23</b>	Luxembourg	310.00
Latvia	379.78	<b>24</b>	Bulgaria	306.78
Cyprus	359.00	<b>25</b>	Poland	302.00
Bulgaria	350.24	<b>26</b>	Romania	293.22
Romania	348.04	<b>27</b>	Lithuania	274.27
EU Average (27)	<b>510.58</b>		EU Average (27)	<b>384.07</b>
EU Average (15)	<b>579.56</b>		EU Average (15)	<b>413.73</b>
<b>EU Minimum Rate</b>	<b>359.00</b>		<b>EU Minimum Rate</b>	<b>330.00</b>

**Source: EU Excise Duty Table July 2010**

\* UK Exchange Rate taken as €1 = £0.8815 (14 October 2010)