



Submission to the Commission on Taxation

Proposal for a facility to allow carbon tax relief to be spent on R&D into small-scale renewable energy through a Designated Investment Fund

18 August 2008

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Terms of Reference

The below submission addresses the following terms of reference as stated by the Commission:

- a. consider how best the tax system can support the economic activity and promote increased employment and prosperity while providing the resources necessary to meet the cost of public services and other Government outlays in the medium and longer term;
- f. investigate fiscal measures to protect and enhance the environment including the introduction of a carbon tax.

Statement of writer's professional interest

Niall McManus, Director of EarthRoute Ltd, is establishing a philanthropic fund for the investment into R&D for the production in Ireland of affordable small-scale renewable energy technologies that have applications in both Ireland and the Developing World. Mr. McManus is receiving assistance in the establishing of this fund from Social Entrepreneurs Ireland, an organisation whose aims are to encourage and support the development of social entrepreneurship in Ireland.

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Proposals for change

1. A brief summary of the proposal.

The submission is made that Carbon Tax for individuals and firms will be self-assessed, with a system of tax credits. The proper application of Carbon Tax credits and compliance will be audited by Revenue, in a manner similar to income tax.

Carbon Tax credits can be claimed where emissions have been reduced by a predetermined amount in the tax year. Proof of emission reductions can be made by receipt of purchase of emission reducing items and installations. When emission reductions can not be met, the amount outstanding is taxable. However, this amount outstanding if paid into a Designated Investment Fund would be eligible for tax relief.

Using the existing tax incentive known as the Relief for Investment in Corporate Trades, otherwise known as the Business Expansion Scheme (with some adjustments), it is proposed to allow for the establishment of a facility to allow for the creation of a Designated Investment Fund which individuals and corporate entities can claim relief on Carbon Taxes.

The Designated Investment Fund will invest into R&D for projects that intend to produce small-scale renewable energy technologies (sub 350 Kw) that are both affordable and have application within Ireland and the Developing World.

The technologies and their parent companies that the fund are to invest into would be certified by an accrediting unit within Government (i.e. Sustainable Energy Ireland and the Environmental Protection agency have the skills base). The accrediting unit would certify that the technology once in application would reduce CO₂e emissions at a meaningful level, if used as an alternative to a fossil fuel energy source. Furthermore, when the technology is in use the accrediting unit would be able to provide *bona fide* unit values to the emission reductions. These emission values would have an economic value within an emission trading scheme such as the Voluntary Carbon Standard and the Post 2012 Carbon Credit Fund, which are described in detail within the submission.

The success of the Fund will be the ring-fencing of Carbon Tax generated revenues for investing in alternative energies, while promoting private sector innovation, jobs and establishing Ireland as a World leader in small-scale affordable renewable energy.

2. Supporting documentation.

a. information on costs and benefits.

Revenue Neutral

- To claim Carbon Tax credits in the manner proposed within the submission, expenditure on energy saving appliances or process must be undertaken. Expenditure on these items will have a VAT charge payable to Revenue.
- If a claim for Carbon Tax credits can not be made, but Carbon Tax relief is applied for by investing in a Designated Investment Fund monies are directed at measures to reduce total CO₂e emissions. Reduction in total CO₂e emissions will assist Ireland reaching its NAP target within the EU Burden Sharing Agreement, and will reduce the cost of having to purchase credits externally which is a cost to the Exchequer.
- Revenue generated from taxing emissions are ring-fenced for emission reduction actions.
- Profits made from investments will be liable to tax.

Knowledge Economy

- The use of income from Carbon Tax relief for investment into R&D increases the skills-base in the economy, potential export earnings, combined with increased tax take and employment, and concentrates on promoting an industry sector that has high global growth opportunities.

Irish Emission Reductions

- The inclusion of Carbon Tax credits into the tax regime promotes the adoption of lower emission purchases and lifestyles.

Establishment of emission accreditation unit within existing Government bodies, with income potential from Carbon Credits

- The existence of international standards and procedures through the International Organisation for Standardisation provides a platform for emissions quantification.

ISO 14064-1:2006 Greenhouse gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

ISO 14064-2:2006 Greenhouse gases -- Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

ISO 14064-3:2006 Greenhouse gases -- Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions

ISO 14065:2007 Greenhouse gases -- Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition

- In the establishment of an Emissions Accreditation Unit using the existing skills-base within the Government bodies of Sustainable Energy Ireland and the Environmental Protection Agency, the quantities of CO₂e reduced by these technologies will be quantified and a source of Carbon Credits will be created. These Carbon Credits will be tradable, generating both income and tax revenue.

Global Emission Reductions and Dovetailing Irish Overseas Development Policy

- Cooperation between an Government accreditation unit, and Irish Aid in the application of small-scale renewable energy technologies in the Developing World, would reduce global emissions, reduce poverty, provide income from Carbon Credits, and promote environmental sustainability which are inline with Government development policy.

b. statistical or other research data underlying the proposal.

- The development of small-scale renewable energy will assist Ireland in reaching its target in reaching 30% electricity generation by these means in 2020.
- The implementation of small-scale renewable technology at a community level combined with the the introduction of net metering will allow consumers to sell electricity back into the grid and generate an income for that community.
- Some 1.6 billion people have no access to electricity. Poor people in developing countries rely heavily on traditional biomass –wood, agricultural residues and dung –for their basic energy needs. This limits economic growth, enhances poverty, reduces biodiversity and contributes to climate change (IAEA 2002). This is a very large market for small-scale renewable energy products. The use the concept of micro-finance as pioneered by Noble laureate Muhammad Yunus these products come available to people.
- In a report for Fáilte Ireland (2007) looking at the establishment of a voluntary carbon off-set fund for Ireland, a link was identified for co-operation between Sustainable Energy Ireland and Irish Aid in development aid. Sustainable Energy Ireland is identified within the submission as a component organisation of a proposed Government accreditation unit.

3. Contextual framework.

- c. to keep the overall tax burden low and implement further changes to enhance the rewards of work while increasing the fairness of the tax system,
- d. to ensure that our regulatory framework remains flexible, proportionate, and up to date,
- e. to introduce measures to further lower carbon emissions and to phase in on a revenue neutral basis appropriate fiscal measures including a carbon levy over the lifetime of the Government.
- f. the guarantee that the 12.5% corporation tax rate will remain.

The proposal addresses all 4 of the above in the following description of how a modified BES scheme aka a Carbon Tax Relief, while working within the framework of the Voluntary Carbon Sector, will reduce emissions in a revenue neutral manner.

3.1 Taxation Framework

The application makes the assumption that a Carbon Tax introduced by the Government would operate within the existing framework of self-assessment. Using as an example the existing application of Income Tax, a Carbon Tax would have a tax credit base. The value of this base would be decided upon by Revenue. For an individual to claim their Carbon Tax credits, they will have to demonstrate to Revenue the total amount of CO₂e emissions they have reduced in the year. These emission reductions can be demonstrated by example in insulation of loft space, replacement of white goods with more efficient makes, changing to a lower emissions car etc. during the tax year. The emissions can be calculated through the energy rating system that exists on many products, and calculated against the Carbon Calculator under development by the DEHLG. All purchases can be proven by receipt and be presented in the event of an audit by Revenue. Where the emission reductions match to the limit, or on a *pro-rata* basis, a claim can be made against the Carbon Tax credits. Where a tax payer does not achieve emission reductions they forfeit the credits and are liable to tax.

Where an individual is liable to tax, they have the option of declaring the tax amount to Revenue, or claim relief for the tax by paying into a Designated Investment Fund at a rate

determined by Revenue. Individuals who do not gain their entire Carbon Tax credits in the entire year, can declare relief on the outstanding amount should they wish to pay it into a Designated Investment Fund, which is broadly similar in context to funds operating within the Business Expansion Scheme.

3.2 Structure and *modus operandi* of Carbon Tax Relief Designated Investment Fund

The DIF is intended to take share-holdings within identified companies. The DIF will define a portfolio that adequately reflects development risks and projects' distance to market. All projects will have to pass a criteria that they will produce small-scale renewable energy, and ideally will have applications in both Ireland and the Developing World. The projects will have prior approval from the Government accreditation unit (comprised of Sustainable Energy Ireland and The Environmental Protection Agency).

The fund will prepare a prospectus which must be approved by the Minister for Enterprise, Employment and Trade which will include, *inter alia*, particulars of fees, remuneration or other charges to be levied in respect of the management of the fund. There is risk with investments into the DIF and a prospectus will be drafted that makes this clear, and it will be submitted to the Minister of Enterprise, Employment and Trade for his/her consideration.

The DIF will have 3 years from receipt of money from investors to invest into Certified renewable energy R&D projects.

3.3 Company types eligible for Investment by a Carbon Tax Designated Investment Fund

The qualifying companies that the Fund can invest into are similar to the BES in which:-

- is a Micro, Small or Medium Sized Enterprise within the European Commission definition in force for the relevant period;
- is incorporated in the State or another European Economic Area (EEA) State;
- is resident in Ireland or is resident in another EEA State and carries on business in Ireland through a branch or agency;
- is not regarded as a firm in difficulty for the purposes of the Community Guidelines on State Aid for rescuing and restructuring firms in difficulty;

- is an unquoted company (except in the case of companies listed on the Irish Enterprise Exchange (IEX));
- is engaged in a qualifying trade **or** whose business consists of holding shares or securities in one or more qualifying subsidiaries; and
- has its issued share capital fully paid up.

Conditions in relation to qualifying companies, trades and subsidiaries must continue to be met for a period of three years after the shares have been issued. A company will not cease to be regarded as a qualifying company if it is wound up or dissolved during the three year relevant period, provided it can be shown that the winding up or dissolution is for *bona fide* commercial reasons, and not part of a scheme or arrangement the main purpose of which is the avoidance of tax.

3.4 Share Capital Structure of Companies that the Fund will invest into

The investment must be in the form of new ordinary share capital and the shares must not carry preferential rights as to dividends or redemption. The whole of the company's issued share capital must be fully paid up.

An investor cannot hold more than 30% of the shares in the company. If an investor holds more than 30% of the shares he will be deemed to be connected to the company and not eligible for the Carbon Tax Relief Scheme. This rule is waived where the investor is investing in his own company where the amounts subscribed for the issued share and loan capital do not exceed €500,000.

If the company is not trading at the time the shares are issued, it must commence trading within two years of the share issue. If the company is mainly involved in R&D activity it must commence trading within three years of the share issue.

3.5 Proposed Structure of Government accreditation unit

The Government through structures and expertise within the Department of Environment Heritage and Local Government (DEHLG), Sustainable Energy Ireland (SEI) and the Environmental Protection Agency (EPA) will be able to establish a mechanism for certifying companies as eligible for investment into from Carbon Tax relief.

These companies for investment must be developing or producing a technology when used by a consumer will reduce emissions at a quantifiable level, and will provide a realistic alternative energy source.

3.6 Determination of Companies as *bona-fide* involved in emissions reductions and the quantification of emissions

Assuming that Carbon Tax is paid *pro-rata* to a unit of Carbon produced by the individual or firm, a price of Carbon will need to be set by Revenue to allow for this calculation. A Carbon Tax will need to set against the value of an underlying asset. The price of carbon as determined from its trading on international markets is the most equitable and meaningful value to be used as an underlying asset. However, as a traded commodity it has a volatile daily price which is not practical for calculating tax returns. Therefore, Revenue will be required to set a price for Carbon on a yearly, or multiple year basis and determine annual Carbon Tax credits accordingly. The National Treasury Management Agency will be able to provide assistance in determining a price for Carbon.

Where the Carbon Tax-based BES scheme differs from the current BES is in the repayment of the initial investment amount and any form of dividend. For the Carbon Tax relief to have been successfully applied to achieve emission reductions a *pro-rata* reduction in emissions to the tax relief must be met. When this has been achieved then, and only then, can the investor receive the return of their investment sum. The Government accreditation unit that gives approval for a firm to be eligible for investment from a DIF will therefore be further responsible for the calculation of emission reductions, and hence will be verifying the reductions, once the firm is in production.

In order for the verification of reductions to be credible they will need to be as robust as those of the Kyoto Protocol's Clean Development Mechanism. If a firm's technology can produce technology that reduces emissions in a quantifiable manner, and the reduction certified, it would be creating the equivalent of Carbon Credits. However, these emission reductions (Carbon Credits) will not be suitable for trading within the EU ETS, but would have value in a similar mechanism. With the creation of the the **Post 2012 Carbon Credit Fund**, funded by five leading European public financing institutions (The European Investment Bank, **Cassé**

des Dépôts, Instituto de Crédito Oficial, KfW Bankengruppe and the Nordic Investment Bank) there will be a market to purchase and trade carbon credits external to the EU ETS.

A credible method of verification of Carbon Credits outside the Kyoto Protocol has been developed as the Voluntary Carbon Standard (VCS). The VCS has been developed by the Climate Group, the International Emissions Trading Association (IETA), the World Business Council for Sustainable Development (WBCSD) and a range of business, government and non-government organisations. Through the VCS a country can establish a registry that will verify emission reductions and provide clear chain of custody and custodial services to bring credits to the market. In France the state body **Cassé des Dépôts**, which has responsibility for investing in projects deemed for the Public Good has established a registry. The Irish accreditation unit that has responsibility for certifying firms as eligible for investment into from funds generated from Carbon Tax relief and certifying emission reductions of approved technology, would be a suitable candidate to act as a VCS registry.

With the establishment of international standards and procedures through the International Organisation for Standardisation there are existing methodologies for quantification that can be applied by a Government accreditation unit. Furthermore, with the Governments of Canada, France and other countries adopting domestic carbon credit schemes there is a wealth of best practice examples, and lessons learnt.

4. Non-structured section of the submission

The fund would intend to be self sustaining with the revenues received from investments that above those returned to investors into the fund would be used for re-investment. Because of the philanthropic nature of the DIF it would intend to establish investors from other avenues such as donations through Corporate Social Responsibility, individual carbon-offsetting, and the sale of Carbon Credits. The use of non-Carbon Tax relief income would be used to buy-out DIF investors at the end of their 5-year investment periods. The income from Carbon Credits is described in greater detail below.

Emission reductions are essential on a global level to mitigate against Climate Change. The successful application of small-scale renewable energy within rural and small communities in Ireland would reduce emissions and have the potential to provide income for the community by selling excess power back to the grid. Within the Developing World economic growth should not be restrained by access to cheap energy. Furthermore, access to cheap energy for the most vulnerable is required to lift people out of poverty. In April 2001 at the ninth session of the Commission for Sustainable Development the governments of the world concluded: "To implement the goal accepted by the international community to halve the proportion of people living on less than US\$ 1 per day by 2015, access to affordable energy services is a prerequisite."

A Carbon Tax Relief Designated Investment Fund will use its income to both reinvest into similar technologies, or into its existing portfolio of companies, and also to subsidise the price of units to make them affordable in the Developing World.

The delivering of small-scale renewable energy technology to the Developing World would both be a market for Irish goods, but also a level of overseas development aid. The establishment of a Government accreditation unit that will provide accreditation of low emissions technology, and also calculates levels of emissions reductions in Ireland, by working with existing structures in Irish Aid, can accredit the instillation of technology on site in the Developing World. Irish Aid's environment policy focuses on raising awareness and building capacity (within Irish Aid and among its partners) to make the links between environmental sustainability and poverty reduction. Therefore there is a policy link between Irish Aid and the proposed Government accreditation unit.

In the application of accredited emissions reduction technologies in both Ireland and the Developing World, whose units of emission reductions can be verified, and quantified would allow for the establishment of Carbon Credits. If the Government accreditation unit was to qualify as a registry through the Voluntary Carbon Scheme as described earlier, these Carbon Credits would have a tradable value. The Carbon Credits would therefore be income streams for the groups/communities that are utilising the technology, in both Ireland and Developing World, and be liable to tax.