# Trading Green Energy

An Ofreg Consultation Paper

August 2004

## Introduction

In 2005 the Department of Enterprise, Trade and Investment (DETI) proposes introducing a Northern Ireland renewable obligation (NIRO) and a system of Renewable Obligation Certificates (ROCs). This will oblige suppliers of electricity to either buy a number of ROCs to stimulate the production of renewable electricity or pay an equivalent amount into a buyout fund.

At present Northern Ireland has a flourishing and growing market in renewable electricity with three companies competing for customers and in particular small business customers. The question which now arises is whether trading in green energy should be continued into 2005/06.

There are two possible scenarios. Under the first there is no green trading and the renewable energy is spilled on to the system and rewarded by NIE's Power Procurement Business (PPB) at whatever value it has for the system. This would be less than avoided fuel cost since it would impose other costs on the system. The value on summer nights, for example, might fall close to zero.

The second scenario permits the continuation of a green electricity market with the price producers get for their electricity being the value that the market places on it.

The first scenario would weaken the drive to expand Northern Ireland's renewable capacity and should therefore minimise total system costs. The second scenario adds a further dynamic to ROCs and should result in a more rapid development of renewables than would otherwise occur.

The purpose of this paper is to seek views on whether there should be green trading and if so, how it should be organised.

This year about 5.4% of the electricity consumed in Northern Ireland will be green, of which 40% comes from the Irish Republic. This includes the units "gifted" to PPB under the Renewable Output Factor (ROF) mechanism as a quid pro quo for avoiding balancing charges. Imports from ROI are needed to support sales until capacity in NI catches up with demand. With few active energy suppliers in the fossil fuel market, renewable electricity increases the choice business customers have and adds competitive pressure to the electricity market.

Accordingly, if there is a desire from the market to trade green energy, Ofreg will facilitate such trades. We would however want to do so in a way that minimised the overall cost to customers.

Were it to become apparent that the cost to customers of maintaining a ROF system in parallel with ROCs would be prohibitive, then Ofreg may opt to suspend the ROF facility.

At present renewables impose a cost on Northern Ireland as the unit costs of the Public

Service Obligation (PSO) and Bulk Supply Tariff (BST) are higher than they would otherwise be. This is explained in more detail in the NIAER response to the Department's NIRO consultation paper - see the Ofreg website : http://ofreg.nics.gov.uk. This year the cost of supporting the existing base of renewables is estimated to be £11.3m. In addition, Renewables receive a Transmission Use of System (TuoS) charge credit that results in slightly higher TUoS charges for everyone else.

With the improvement in the revenues of renewable generators which ROCs will provide, it is no longer defensible to have renewables subsidised by all other electricity users by lower PSOs and low TUOS. Accordingly, it is proposed that these charges will be normalised. This will add about 1p per KW/h to the cost of renewables and have the effect of reducing costs for other customers by about £4m per annum.

The energy price of the output from renewable producers will then be set by the market. The value placed on it will be influenced by its reliability and the scope for capturing the value of Climate Change Levy (CCL) exemption.

## Market Structures

Ofreg is willing to explore with renewable producers and suppliers the market structure which will enable them to trade most efficiently while minimising the need for any subsidies - direct or indirect - from the main body of electricity users.

The electricity from renewables will be put on to the system and will displace fossil fuel in Northern Ireland. It will be bought by suppliers for onward sale to final customers. There are a number of ways in which this might be done:

(a) suppliers and generators could trade bi-laterally as at present and pay balancing charges; or

(b) a wind pool could be established into which generators would nominate their output and be paid a price based on pool selling price; or

(c) all wind power could be sold to PPB for a price related to the value of energy avoided and sold on to wind suppliers at a wind BST or in bi-lateral trades.

Any of the above could work with top up and spill charges or with a ROF arrangement which would remove intermittency risk.

The effect of all three should be much the same and there is a strong case for sticking with (a) with ROF which has the virtue of avoiding a further change of regime as we move towards an island-wide market.

It might be expected that as at present renewable suppliers will endeavour to sell at a small discount to fossil fuel suppliers. A large discount would result in a demand they could not satisfy. No discount might result in no sales. Under the new arrangements the value of wind

energy to its producers should fall (ie its market value) if it has to bear its full share of system costs. This should reduce the price that suppliers are prepared to pay for it. This will however have a direct impact on the ROF factor. The factor is set at a level which delivers to PPB a value which on average equates to the cost to PPB of managing the wind industry's balancing charges. It therefore represents a monetary value. If the value of wind energy falls then it follows that more units are required to cover the balancing cost. The factor therefore must be increased to avoid inadvertently introducing a new cross subsidy of the wind industry at the very point where it has become possible to unwind the existing subsidies.

But an increase in the ROF will not constitute an increased financial cost to wind suppliers. By way of illustration a factor of 20% on an energy price of – say - 3.5p adds 0.7p to the amount the supplier has to obtain in the market. Then if the energy price falls to 1.75p the supplier could afford a ROF of 40%. The generator would be indifferent as it would receive both the same ROC revenue and the same energy price irrespective of whether the units were to be resold as green or "gifted" to PPB under ROF.

The dynamic that a larger ROF would create would be to push up the demand to produce renewable electricity at a much faster rate than the growth of the green market. Moreover, while a supplier relying entirely on ROI imports would not be able to continue trading, a supplier with a mixed ROI/NI generation portfolio would be able to continue to trade as before since all of the ROF units could be sourced at Northern energy costs.

In this way the potential damage that NIRO will do to cross border trade in renewables could be mitigated.

## Support for non wind technologies

Ofreg is willing to explore with all technology users the case for special support mechanisms. Other technologies may face high initial capital costs and uncertainty about their revenue stream. The first might be substantially offset by grant aid from the proposed Renewable Development Fund. The second could be dealt with by PPB acting as buyer of last resort and assuming the risk on ROC values in the future. This could de-risk capital intensive projects. Alternatively, PPB might offer incentives to schedulable renewables to generate at periods of high demand.

## The Eco-tariff

NIE's Public Electricity Supply business (PES) operates an "Eco tariff" at the same price as the domestic tariff. PES does not have to balance its renewable supplies through ROF as its total portfolio is in balance. On the other hand Eco tariff customers pay their full PSO charges at present. In 2005 PES should be able to buy for its eco energy tariff at prices below its average fuel cost. In order to avoid market distortion the eco tariff would have to be sold at a regulated price that would be linked to the normal tariff with any fuel saving used to reduce tariffs over all and Eco energy customers making a contribution to the fixed costs of the contracts.

## Consultation

1. Following the introduction of NIRO and ROCs, should customers who still wish to purchase energy that is exclusively from renewable sources be able to do so?

2. Most renewable energy for the immediate future will be wind. If renewable energy is to be traded should the intermittency of wind continue to be de-risked as per the ROF arrangements or should normal Top and Spill apply?

3. With ROCs raising the income of the renewable sector can any unnecessary cross subsidies of renewables be justified?

4. How should non-wind renewables be encouraged?

   - by capital support?
   - by off-take contracts?
   - by PPB acting as purchaser of last resort?
   - by a ROF-type arrangement?

5. Should the NIE PES's Eco-energy product be continued?

Responses should be sent by 12 September to:

James Hutchinson
Ofreg
Brookmount Buildings
Fountain Street
Belfast
BT1 5EE
james.hutchinson@ofregni.gov.uk
fax 02890 311740
Please include a one page summary as part of your response.