

**Maximising Customer Value: Options for Northern Ireland
Energy Holdings.**

**A Consultation Paper by the Northern Ireland Authority for
Energy Regulation.**

February 2006

Introduction:

Northern Ireland Energy Holdings (NIEH) owns the electricity interconnector with Scotland (Moyle) and the gas pipeline which connects Scotland to Northern Ireland (SNIP). NIEH is governed by its members on behalf of electricity and gas customers in Northern Ireland.

In Great Britain and Northern Ireland all the other gas and electricity networks are owned by private sector companies who, while providing, managing and developing energy infrastructure networks, must seek to earn profits for their shareholders. In the Irish Republic the corresponding networks are operated by state owned utilities which also have some assets in the UK including Northern Ireland. They also earn profits for their shareholder which in this case is the Irish Government.

NIEH is therefore uniquely Northern Irish in that it is an energy infrastructure company which has no shareholders. (There are similar entities in other UK sectors such as Glas Cymru which operates Wales's water company.) The assets are 100% financed by debt so the cost of capital is usually less than half that of a private sector or state owned company which is treated as if it were a private sector company.

It is the job of the board of NIEH to maximise customer value - minimising costs and ensuring that the company maintains the highest standards of cost control and operational efficiency. NIEH's members, representing energy users in Northern Ireland, are there to hold the board to account for these responsibilities.

This structure has and will continue to reduce energy costs in Northern Ireland below what they would be with a more conventional ownership structure – though the scale of the rise in gas prices of recent years has dwarfed all other costs reductions secured across the gas and electricity industries in Northern Ireland.

Maximising customer value is achieved by reducing customers' exposure to energy costs or the risk of higher costs. This paper sets out one opportunity for doing this in relation to Moyle and explores other proposals for building on this. Throughout the rest of this paper references to NIEH are in relation to steps which it might take through its ownership of Moyle. There are no proposals in relation to SNIP.

Maximising Customer Value: NIEH's commitment to maximising customer value means that any surplus which it makes must be returned to customers. While in many circumstances that may simply mean a lower tariff the following year in other cases it may be less straight forward. The onus is on NIEH to demonstrate that surpluses are used efficiently and equitably as between customers and that assets – including financial surpluses – are made to work so as to produce the best value for customers, in the same way as are the assets of shareholder-owned companies for their shareholders. In doing this, the NIEH Board is answerable to its members and to the Authority.

Financing Moyle: When the idea of building an electricity interconnector between Scotland and Northern Ireland was put forward almost twenty years ago it was envisaged that the cost would be met by adding a charge to the electricity transported from Scotland. With the liberalisation of electricity markets it became

evident that this approach would not work. Moyle had to be financed in circumstances where electricity flows would be small as in a liberalised market it was not possible to guarantee that there would be large electricity flows throughout the forty year period over which the interconnector would be financed.

The perceived value of Moyle to the Northern Ireland electricity system was such that it had to be constructed even though market failure would ensure that without intervention it would not be built.

Accordingly it was agreed that it would be added to NIE's transmission asset base and that any shortfall in its revenue would be recovered from all customers through an addition to the Transmission Use of System charge (TUoS). NIE's parent company, Viridian Group PLC, with the support of the Regulator and the Department subsequently sold Moyle to its current owners. The transaction was only possible because the revenues of Moyle were guaranteed by customers.

Moyle's experience to date:

Moyle was constructed at a time when electricity generation costs were substantially lower in Great Britain than in Northern Ireland and – while there were reasons why this gap could be expected to diminish over time – it was assumed that generation in Great Britain would remain lower cost than Northern Ireland's generation. The perceived value of Moyle to Northern Ireland was therefore two fold. It provided competitive pressure on Northern Ireland generators as we moved towards a competitive generation market and it provided access to additional capacity for dealing with emergencies and outages. It was however expected that in any normal year Moyle would not earn sufficient from its charges for conveying electricity to fully cover its costs and that a contribution from the TUoS would normally be required.

The experience to date has been much better than expected. Moyle started full commercial operation in April 2002 and for its first year was in the ownership of Viridian. During this period its investment cost was part of NIE's Regulatory Asset Base and customers paid the difference between NIE's allowed cost of capital and Moyle's capacity revenue.

The transfer of ownership occurred at the beginning of the 2003/4 tariff year on 14th April. Demand for the interconnector's capacity increased and the revenue increased. Moyle earned surpluses which it was able to put aside for a rainy day. In 2004/5 in addition £2.3m was returned to customers in the form of a lower charge. In 2006/7, a further £12.4m is to be returned to customers, offsetting part of the tariff increase which would otherwise have taken place.

In the last two years generation costs in Great Britain have risen substantially reducing the benefit of importing electricity from Scotland. Despite this and the current and anticipated 2006/7 revenue shortfall Moyle has not required a contribution from customers through an add-on to the TUoS.

Moyle was constructed on the basis that it would require a contribution from customers through the TUoS charge each year for forty years – forty years being the

normal period for the depreciation of NIE's transmission assets. The outcome has been that, apart from the first year, no contribution has been required in the first five years of its life; the financing period has been shortened from 40 years to 30 years and the revenue shortfall when it is required will always be less than it otherwise would have been.

The "BETTA Rebate":

In Great Britain the electricity trading system which applied to England and Wales was in 2005 extended to Scotland. This caused a change in the way in which Moyle related financially to the GB electricity market. It is not necessary to go into the details here. Suffice it to say that Moyle negotiated a capital repayment of £30m which is to be paid in three instalments with the second and third instalment earning interest in respect of the period between Moyle becoming entitled to the rebate and the date on which it all will be paid.

When Moyle was bought from Viridian the purchaser raised a bond of £135m to cover the cost. This bond is to be financed over 30 years. If the purchase had taken place after the BETTA induced changes the bond would have been for £30m less with a corresponding reduction in the annual amount of money which Moyle would require each year to finance its business. As matters currently stand although Moyle will receive £30m in capital repayment, the debt represented by the £30m slice of the bond which corresponds to this rebate will remain until 2033 and the company will have to continue to service this debt unless it is bought out.

Making the best use of the BETTA Rebate:

The Secretary of State has announced a policy initiative to substantially increase the amount of renewable electricity produced in Northern Ireland and has established a fund of £59m to help stimulate renewables.

Northern Ireland must increase the share of its electricity coming from renewable sources for a number of reasons but the principal reasons are to reduce green house gases – mainly CO₂ – and to improve the security of supply by reducing reliance on external fuel sources. The Secretary of State's initiative requires a significant private sector response if its aspirations are to be translated into a substantial investment in renewable generation.

Northern Ireland's response to the need to develop non wind renewables – while no worse than the UK's generally – has been patchy. To date only one significant non wind renewable generator has been commissioned. While NIE and Action Renewables are doing invaluable work at the micro scale so far larger scale projects have not materialised. This is not due to a lack of potential. Many profitable opportunities for large scale electricity generation from biomass, energy from municipal waste and agro-food industry waste exist as well as other technologies. But in the absence of the right framework of regulatory and financial confidence the market fails to exploit these opportunities. And this despite the fact that for some sectors of the agro-food industry in particular failure to dispose of waste by, for example, converting it into energy will compound the difficulties this industry will face in the future in complying with ever more stringent environmental standards.

The Renewables Imperative:

It is indisputably in the interests of Northern Ireland's electricity users and of Northern Ireland generally that the opportunity to develop large scale schedulable renewables created by the Secretary of State's initiative is seized and that Northern Ireland benefits to the greatest extent possible from this opportunity. Renewable electricity is remunerated by two principal revenue streams – the money paid for the electricity itself and the revenue from the sale of renewable obligation certificates (ROCs). Some renewable technologies will receive other forms of revenue such as payments from local authorities and businesses for avoiding high disposal costs for waste. Renewables should also in the Single Electricity Market be entitled to other payments where appropriate for capacity and ancillary services.

Unlike the makers of most other products electricity generators are paid the market price each half hour for producing electricity. Many will prefer to manage the possible volatility of half hourly market prices by making a contract to sell to a supplier at an agreed price. For generators who are producing electricity within a site shared with consumers such as a factory or industrial estate there may also be the opportunity to sell heat, thus increasing efficiency, and to consume some or all of the electricity on site and, as it avoids the need to use NIE's networks, this is the most valuable use of electricity.

It is against this background that a private sector consortium has proposed to establish a renewable equity fund (REF) to tap the renewable potential on both sides of the border. NIEH has proposed that they should become a founding investor in this fund. Their reasons for doing so are:

- the expansion of renewables in Northern Ireland is a major Government priority;
- NIEH's structure and role within the Northern Ireland energy sector maximises the chances of the renewable investment opportunity being viewed favourably by the financial markets;
- on the evidence to date renewables will provide a return on investment substantially better than the other options available to NIEH;
- failure to develop renewables in Northern Ireland will expose customers here to higher requirements to buy carbon and meet renewable obligation levels with the associated costs;
- the structure of the proposal minimises risk exposure; and
- the returns to a founding investor will be greater than to subsequent investors.

Accordingly the Authority has approved NIEH's request to commit £10m to the proposed REF. This money will be drawn down as and when good quality projects are developed to take up the funds available.

How the Fund will work:

The promoters of the fund expect to raise £100m in commitments so that NIEH's share by investment would be 10% though as a founding investor its share of profits would be greater.

It is envisaged that the NIEH investment would be spread through all projects in which the fund invests thereby managing any residual risk by investing across a portfolio of projects. Investors would be rewarded by an appropriate combination of dividends and capital growth. It is envisaged that the fund would be sold once the portfolio of projects was constructed, commissioned and fully operational. This should happen between five and ten years after the establishment of the fund.

NIEH's share of the proceeds and repaid capital would be returned to customers. The most likely route for returning income earned in this way would be through reduced deficits in the cost of running Moyle and hence a reduced TUoS charge.

NIEH's money which is committed to the fund would remain in NIEH controlled deposit accounts earning interest for customers until it is required to finance projects.

Maximising Customer Value from the BETTA Rebate:

In total the BETTA Rebate will amount to a sum in excess of £30m including the interest which will have been received when the final instalment has been paid by Scottish Power to Moyle. While £10m has been committed to the REF it is expected that this will be repaid in due course.

The Authority is in ongoing dialogue with NIEH as to the options for the best use of the BETTA Rebate against the overall objective of maximising long term customer value. As this dialogue progresses, NIEH after consultation with its members is expected to bring forward to the Authority further proposals for the strategic use of the BETTA Rebate. In doing so, NIEH will have to ensure the ongoing viability of the company taking into account its obligations to its other stakeholders, principally its financiers. The Authority now considers it would be helpful, in informing this dialogue, to seek wider views as to how the objective of maximising customer value might best be achieved.

The £30m belongs to customers over the lifetime of the liability which it is set against. It therefore is the counterpart to £30m of debt which customers must finance each year between now and 2033. As such the rebate does not in itself represent a net increase in customer wealth. The purpose of this part of the paper is to consider two things:

- (a) how the £30m should be divided between each year's cohort of customers between now and 2033; and

(b) what is the way of returning the money to customers which maximises customer value?

In order to avoid a call on the TUoS to cover anticipated 2006/7 revenue shortfall for Moyle £1.5m of the rebate has been used. A further £4.5m has been added to Moyle's reserves in view of the revenue uncertainty the company faces over the next few years. As the charge for electricity for 2006/7 is about to be set it is not envisaged that any further cash return to customers will be made in course of 2006/7.

The Base Case:

As noted above the rebate relates to liabilities which customers will face between now and 2033. The most equitable use of the money would be to buy out £30m of the bond and reduce each year the cost of financing Moyle by the corresponding amount. If £30m were applied to this use it would reduce the cost of Moyle by an amount which would vary each year starting at around £1.7m in the early years and declining to £0.6m in 2032/33 (at February 2006 money values). However as already noted £10m of the rebate will only be available for this purpose once the renewable investment starts to be repaid.

While the buy down of the bond must remain the base case there are two concerns with it. The first is that buying out debt gives customers the least value for their money. Using the standard public sector discount factor of 3.5% the net present value to customers of using the money to buy out a strip of the bond is only £0.55m per £10m of bond bought out and that is before any transaction costs are taken into account. The entire rationale for NIEH was to reduce costs by buying out high cost equity. Of all the financing obligations which customers might seek to buy out Moyle's bonds would be the second last – the very last being SNIP's even lower cost bonds.

The second concern is that while buying out the bond and returning the money to customers over 27 years certainly satisfies the requirement to be fair to each generation of customers there may be other ways of meeting the intergenerational equity test with a different but more efficient profile of repayment. Indeed the REF does this by reducing the renewables investment and purchase of carbon emission permits that later generations of electricity consumers will be required to make.

Moyle's revenue shortfall requirements between 2007 and 2033 cannot be known with any degree of certainty. As a general rule its ability to raise enough revenue from the sale of capacity will be related to price differences between Northern Ireland and Scotland. If differences are large demand for Moyle should be high and revenues buoyant. If the price in each market is similar there will be less scope for Moyle to earn money.

On this analysis Moyle is likely to have a significant revenue shortfall in 2007/8 unless the way in which Moyle is financed improves within the new all island electricity market. At present while customers in both parts of Ireland have contributed to the financing of Moyle through the Moyle capacity auctions the liability to finance Moyle in the event of a revenue shortfall rests exclusively with Northern Ireland's electricity users. Given Moyle's value to the whole of the island's

energy market will or should this change in the future as the Single Electricity Market comes into effect in 2007? Perhaps until this has been decided no binding long term decision about the rebate should be made.

Options:

From customers' perspective, the chosen option or options should meet an inter generational equity test either by the money being repaid over the lifetime of the bond or with an alternative profile which meets the inter generational equity test in a different way – by for example avoiding charges/costs which other generations would otherwise have to pay. In implementing the plans for use of the BETTA Rebate, NIEH must also ensure that its plans are consistent with its sustained ability to meet its financial obligations and to maximise customer value over the long term, are tax-efficient and take into account all of the relevant legal, accounting and financing considerations.

Some possible future investments by NIEH may be financed to a large extent by debt at a cost of capital comparable to Moyle and SNIP. However, there would be a case for retaining the money to assist other investments, particularly where an equity injection by NIEH into such an investment would result in a lower overall cost of capital.

Improving Returns to Customers:

Building on the rationale for NIEH better returns could be secured for customers by taking out equity from other investments which currently customers are obliged to finance. The following may not all be practicable and some would certainly require the co-operation of other companies. They are put forward illustratively to stimulate debate and discussion.

- (a) NIE's assets earn a return of more than twice the return on NIEH's assets. When Moyle was sold by Viridian part of the transaction included the buydown of £10m of NIE's asset base. It would be merely an extension of this initial transaction between NIE and Moyle if the money from the BETTA Rebate were used to buy out a small fraction of NIE's growing asset base. Viridian's shareholders would benefit immediately from the cash and customers would save more each year than they would from repaying the bond Moyle early;
- (b) The Single Electricity Market can only bring the promised benefits to customers throughout Ireland if there is a major investment in the transmission infrastructure through enhanced North-South interconnection. Such a large transmission investment could be efficiently financed at a reduced cost of capital using a combination of equity and debt;
- (c) If further interconnection with Great Britain is required via an interconnector between the Republic and Wales the extension of the mutual model - which has been shown to work well for Northern Ireland's electricity and gas

interconnectors with Great Britain - to the proposed new interconnector might be a means of realising that investment in a cost-effective way for customers throughout Ireland;

- (d) Similarly an investment either in the gas transmission pipes owned by BGE or Phoenix would have a similar financial effect. The justification of using electricity customers' money for this would be that 80% of the cost of gas transmission is paid up by electricity customers via the cost of electricity generated by Ballylumford and Coolkeeragh. This device should however have the additional attraction of reducing the cost base for both Phoenix and Firmus Energy.

All of the above would pass the inter-generational equity test but may need to be designed in such a way as to minimise tax risk. If a second electricity interconnector with Great Britain were to be built while any use of Northern Ireland customers' money would have to secure an appropriate return for Northern Ireland electricity customers. The above options would – assuming they were tax efficient – produce much larger NPVs than buying down the Moyle bond.

- (e) The money could be used to finance the extraction of SONI from the Viridian Group. Work is currently under way to identify all the issues which will need to be addressed in establishing a wholly independent Transmission System Operator for Northern Ireland. The costs will in all probability fall on customers. At present the costs are unknown but they will become clearer over the coming year;
- (f) Customers in Northern Ireland are paying the costs of the systems which facilitate the introduction of the competitive retail market. Since the costs are front end costs for a system which will be amortised over several years and which should run for many years thereafter the costs might be met either by the rebate or borrowed from NIEH avoiding the need thereby to place the costs in NIE's asset base;
- (g) The interest on the money could be employed to finance an enhanced energy efficiency programme. Northern Ireland's hitherto commendable contribution to energy efficiency is now falling behind Great Britain's. The return on investment in energy efficiency is greater than the return on energy investment and high energy and carbon costs serve to improve this return. This type of measure would in particular complement any decision to introduce two tier tariffs which by increasing the cost of the marginal unit of electricity would make energy efficiency investment even more attractive to customers. If the cost of the energy efficiency programme were allocated to NIEH to be financed out of the income earned by the rebate customers would be relieved of any immediate pressure to increase the energy efficiency levy, the value of the rebate would be enhanced, there would be no risk to the rebate itself as the capital sum would remain intact. On the basis of experience to date with the Energy Efficiency Levy every £1m spent by NIEH would – depending on the technology – provide lifetime benefits of £4m to customers.

Conclusion:

This paper sets out the Authority's view on the desirability of NIEH maximising customer value in particular in relation to the BETTA rebate. A first step in doing this will be through the commitment of £10m to the Renewable Equity Fund in order to maximise support for the Secretary of State's renewable initiative. Other options for enhancing the value to customers have been described above. The Authority would like to encourage a public debate on the most effective way of maximising the value to customers of the balance of the Betta Rebate. Views on the proposals above and further suggestions would be welcome.

Comments on this paper and in particular other ideas for maximising the value of the BETTA Rebate are invited and should be sent to:

Lisa Mullan
Queens House
14 Queen Street
Belfast
BT1 6ED
Tel: 028 9031 1575
Fax: 028 9031 1740
Email: lisa.mullan@ofregni.gov.uk

The closing date for responses is 30 April 2006.

Please include a one page summary with your response.

Please indicate if you do not wish your response to be published.