

# **PAYING FOR ENERGY INTERCONNECTORS**

**A Consultation Paper issued by the Director General of  
Electricity Supply for Northern Ireland**

**SEPTEMBER 2002**

## **Introduction**

This paper examines the options for reducing the cost of financing the Scotland Northern Ireland energy interconnector assets (gas and electricity). The assets are currently owned and operated by private companies (Premier Power and Moyle Interconnector plc, a Viridian subsidiary) which are financed by both debt and equity capital. The paper examines the option of transferring these assets to a Special Purpose Vehicle (SPV) which would be able to finance the assets entirely by debt thereby reducing the cost of capital. The SPV would have no share capital and be a not-for-profit organisation.

Northern Ireland's gas and electricity interconnectors with Scotland are gradually changing the energy market in Northern Ireland. They are also having an impact in the Irish Republic.

The Moyle Interconnector, with a capacity of 500MW has been developed as a strategic infrastructure project to link the previously isolated NI electricity system to the systems of Great Britain (GB) and the European mainland. The potential benefits of access to these larger systems for the NI electricity consumer include downward pressure on electricity prices from increased competition in generation along with enhanced security and diversity of supply.

The Moyle interconnector is paid for through the NIE Transmission Use of System charges (TUoS). Receipts raised from auctioning its capacity are used to help offset TUoS charges. The capital cost is depreciated over 40 years and the rate of return is decided every five years. In its recent T&D price control review Ofreg allowed the interconnector a 6.25% rate of return.

The Scottish Northern Ireland gas pipeline (SNIP) is owned by Premier Transmission which in turn is jointly owned by British Gas and Keyspan. It

provides Northern Ireland with natural gas, enabling gas to be used in power stations for generating electricity and supporting a natural gas industry. It is paid for by gas users - of which electricity customers through the power station's purchases are the most important. Under the agreement by which the pipeline was built the capital cost will be recovered up to 2021. It amounts to £10.8 m per annum real (i.e. it will grow each year by the rate of inflation).

Under the current regime the capital cost of Moyle each year will be 3% (depreciation) of the opening asset value plus 6.25% return on the outstanding balance each year during the lifetime of the present price control. This will be in the region of £10.5m per annum to 2006/07 (2001/02 prices).

## **Proposal**

The Moyle Interconnector asset is owned by Moyle Interconnector plc (Moyle) which is a wholly owned subsidiary of the Viridian Group. The proposal involves the 100% debt financing of Moyle and the disposal of the entire issued share capital in Moyle Interconnector plc to a Customer Trust.

NIE is exploring the option of placing Moyle in a Special Purpose Vehicle (SPV) which would be able to finance the company entirely by debt thereby reducing the cost of capital. Under the proposal the cost of Moyle would be fully amortised over 30 years instead of 40. The current status of due diligence suggests that during the lifetime of the asset the cost to customers would be lower in most years and indeed with appropriate profiling could be lower every year than under the traditional price control.

However, the Moyle financing proposal is still at the due diligence stage and costs and savings quoted in this document are indicative only.

## **The Choices**

The costs in any given year depend on the type of bond issue and the profiling of debt repayments which could be front ended, back ended or equalised over time.

The bond can be either fixed rate or index linked. The former is based on a fixed nominal interest rate while the latter gives a fixed real return to the holder as the interest payment on the outstanding capital varies year on year with the actual rate of inflation. In both cases savings are guaranteed in years 31-40 as the capital cost of the interconnector would be fully paid by then compared to the traditional price control method i.e. even if the cost of capital were 0% in years 31-40 customers would save £2m-£3m pa in depreciation charges.

A fixed rate bond based on 30 equal annual principal repayments results in higher costs over the first five years but this is followed by annual savings over the final 25 years of its life. Other repayment profiles could provide savings in all years including the first five.

## **Risks and Benefits**

For customers the benefit would be a lower financing cost for Moyle over its lifetime. The risk for customers is that if the cost of capital falls in future they could be locked into a commitment for 25 years for higher payments than under conventional price controls.

However, opting for index-linked bonds could reduce this risk. These reduce the risk for customers of locking in at a rate that proves to be high but

customers lose the chance of a windfall gain if inflation is higher than assumed.

Other risks and costs - the operating costs, the risk of non-availability etc - would be common to both models for financing the asset.

The risks for NIE would be diminished, as they would not own the asset. Viridian's interest would be the development fee (NIE have proposed a £4m development fee) and any profits which Power Team would make from a periodically market tested maintenance contract. Viridian would also forgo the opportunity to take a margin on the allowed cost of capital.

### **Assessing the Risks for Customers**

Ofreg has calculated the bond financing equivalent Cost of Capital for both index linked bonds and fixed rate bonds. With appropriate profiling of repayments, the cost to customers for each 5-year period can be lower than the current 6.25%.

The benefit to customers can be measured in three different ways. The most conventional method is to show the Net Present Value (NPV) of the benefits to customers of bond financing compared to the traditional price control<sup>1</sup>. Normally the option that gives the largest NPV is the preferred option. However, NPV calculations are heavily influenced by time and counterfactual assumptions and the largest NPV could be achieved by having the capital repayments occurring at the end – which would give a low cost interconnector to early users and a high cost interconnector to users in 30 years time.

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<sup>1</sup> The calculated savings are relative to the cost under the traditional RAB model with a constant 6.25% cost of capital and a conventional kinked depreciation profile of 3% in years 1-20 and 2.0% in years 21-40.

An alternative would be to look at the actual year on year reduction in payments that customers make. These will depend on the repayment schedule chosen. As a check against this method, and to ensure that it is robust against a possible lower cost of capital in later years, these figures can also be used to show what the equivalent cost of capital figure would be if the conventional method were to provide a similar cost in each five year period. This provides comfort that the risk of the traditional price control approach providing lower costs in later years is minimal.

Figures A1 – A3 in the annexe show, for three different repayment schedules, the annual cost to customers for 40 years under:

1. the conventional model at 6.25% real;
2. the 30 year fixed interest bond; (i.e. does not vary with the annual percentage change in the RPI - fixed in nominal terms) and
3. the 30 year index linked bond (i.e. varies with the annual inflation rate - fixed in real terms).

On the basis of work to date Ofreg's preferred option is an index linked bond with repayments over 20 years @ 4% per annum of the debt funding followed by 10 years @ 2%. While this option does not give the highest NPV of savings it ensures that the equivalent cost of capital is never greater than 6% in any quinquennium over the 30-year life of the bond and indeed falls as low as 3% in years 21-25. Other profiling options are being explored to balance the benefits between current and future customers. The profile of costs under the preferred option is shown in Figure A3 in the annexe.

However, an alternative view might be that, given Northern Ireland's high cost

base for electricity between now and 2012, there might be a preference in favour of maximising savings now (e.g. Figure A2. index-linked bond option) and accepting higher charges later when other cost pressures such as the Ballylumford buyout and NFFO will have disappeared.

### **Refinancing SNIP**

The benefits in refinancing SNIP, by giving the owners the net present value of their anticipated cash flows in respect of their capital expenditure between now and 2021, is generally accepted provided this could be financed at a cost of capital below the discount rate employed by Premier Transmission who own SNIP.

If SNIP could be refinanced on a similar 30 year bond to that proposed for Moyle i.e. based on a fixed-rate bond with equal annual principal repayments the cost of SNIP could fall by £3m-£5m per annum between now and 2021. There would be a higher cost between 2021 and 2033 averaging £2m-£3m per annum more than it would be under the present arrangement. Discussions exploring this option have been initiated between the owners of SNIP and a bank. These discussions are at an early stage and the figures quoted above are very tentative and, as with Moyle, depend on the financing option chosen.

### **Interconnector SPVs**

The ownership of the assets for Moyle and SNIP placed in SPVs could be financed at a lower cost than the continuation of the present arrangements. The benefits would accrue to customers from the first year in lower prices for both gas and electricity.

The responsibility for the operation and maintenance (O&M) of the two interconnectors would then be allocated to companies that would have both a contractual and a commercial incentive to maintain them to a high standard at minimal cost. These could be NIE and Phoenix but alternatively the O&M contracts could be subject to competitive tendering.

## **Consultation**

Ofreg invites interested parties to express views on this proposal. In particular, comments are invited on:

- (a) the principle of moving from a traditional price control for the cost of capital to the debt funded SPV model; and
- (b) the appropriate profiling of debt repayments balancing the benefits between current and future customers given the cost pressures on electricity prices now and those likely in the future.

Comments should be sent to Michael Lowry, Ofreg, Brookmount Buildings, 42 Fountain St, Belfast BT1 5EE by 8 October 2002 in writing or by e-mail.

E-mail: [michael.lowry@ofregni.gov.uk](mailto:michael.lowry@ofregni.gov.uk)

Copies of this consultation paper can be made available (if required) in large print, Braille, audio cassette and a variety of relevant minority languages.



# Annexe

Figure A1: Indicative financing costs with repayment schedule of 30 years @ 3.33%, (£000's 2001/02 prices)

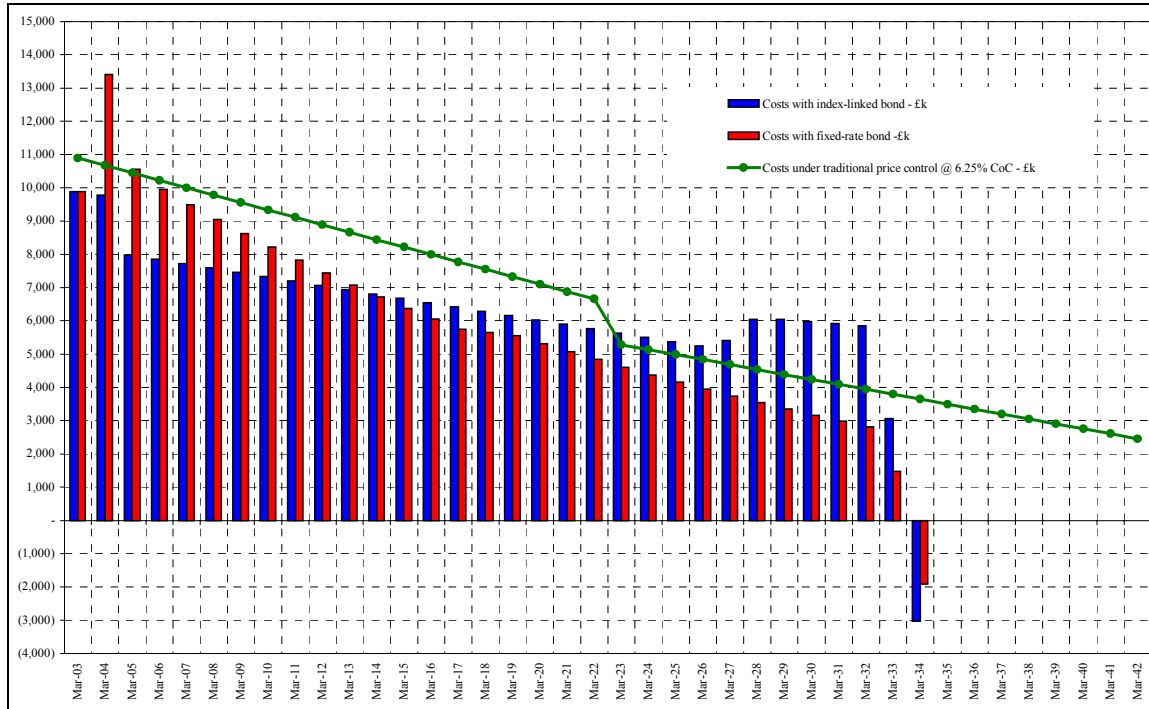


Figure A2: Indicative financing costs with repayment schedule of 10 years @ 2% followed by 20 years @ 4%, (£000's 2001/02 prices)

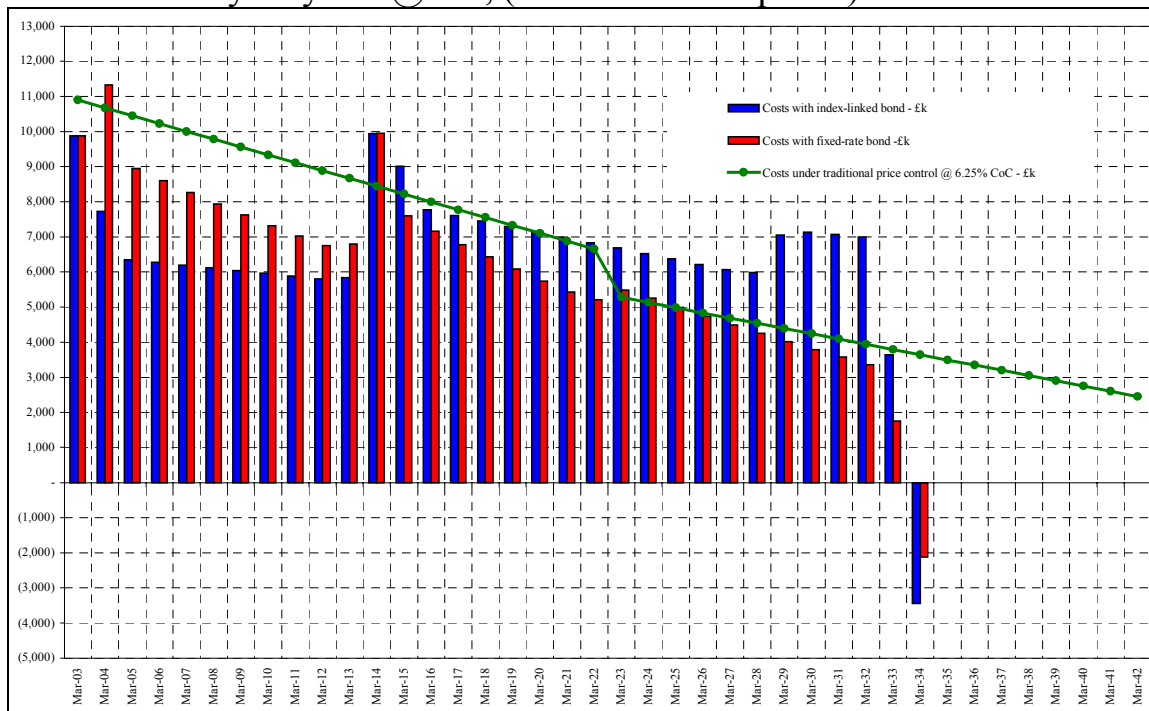


Figure A3: Indicative financing costs with repayment schedule of 20 years @ 4% followed by 10 years @ 2%, (£000's 2001/02 prices)

