

**PROPOSALS FOR A CHANGE IN
NIE's CHARGES FOR NEW
CONNECTIONS**

**A
CONSULTATION PAPER
By the Director General of Electricity Supply for N.I.**

JUNE 2001

INTRODUCTION

Northern Ireland Electricity plc. (NIE) has asked the Director General of Electricity Supply for Northern Ireland (the Director) to approve a change to its connection charge policy. The company wishes to change the current connection charge policy to one based on a new 'Tariff Support' mechanism.

The Director and NIE now wish to seek views on the proposed change and have produced this consultation document to that end. This consultation paper details the existing and proposed policies, looks at the impact on customers of the proposed changes, and the implications for individual bills.

The Director would welcome views on any of the questions raised in this document, and on any other points relevant to this issue. Comments should be sent by Friday 10th August 2001 to:

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BACKGROUND

Customers pay a one off connection charge when their premises are connected to the distribution system, or a material change in their supply requirements necessitates changes to the distribution system. NIE's existing connection charge policy is detailed in their current "Statement of Charges for Connection to the Northern Ireland Electricity plc Electricity Transmission and Distribution System", copies of this statement are available from NIE for a fee of £5 exclusive of VAT. Connection charges are normally paid in advance, and the underlying principle is that the customer should make a contribution towards the additional costs incurred in making the connection to the system.

Under Article 19 of The Electricity (Northern Ireland) Order 1992 NIE has a duty, upon being required to do so by the owner or occupier of any premises, to give a supply of electricity to those premises. In meeting such a request NIE may require any expenses reasonably incurred in providing it to be defrayed by the person requiring the supply of electricity to such extent as is reasonable in all the circumstances.

More specifically under the terms of its licence NIE shall set connection charges at a level which will enable it to recover:

- (a) "the appropriate proportion of the costs directly or indirectly incurred in carrying out any works, the extension or reinforcement of the licensee's system and the provision and installation, maintenance and repair and, following disconnection, removal of any electrical lines, electrical plant, meters, special metering, telemetry, data processing equipment or other items; and
- (b) a reasonable rate of return on the capital represented by such costs".

Connection charges are not included within the present price control. Any dispute over the charge requested by the company may be referred to the Director for determination, either by the person seeking connection or by NIE. The determination would require the Director to determine the appropriate cost of the connection and the proportion to be paid by each party. If the person seeking connection wishes to proceed on the basis of the agreement as settled by the Director, NIE shall enter into and implement such an agreement in accordance with its terms.

THE EXISTING POLICY

When a new customer is connected to the NIE network additional costs are imposed on the system. At its minimum there is the cost of a new line or service cable to the particular premises and its connection to the distribution network. In addition, the new connection may require the reinforcement of the existing network to cover the additional load.

The connection charge is based on the total costs to NIE of the work to be done including the assets to be installed for the specific benefit of the party seeking the connection. Charges for reinforcement of the system necessitated by the connection are limited to reinforcement at the voltage level of the connection and the level immediately above.

Both connection and reinforcement costs are funded from the combination of the new

customer's contribution (i.e. the new customer's connection charge), and from tariff revenues (i.e. Use of System charges). Use of System charges include the cost of reinforcing the network to meet general load growth and are separately regulated under price control. The apportionment between connection charges and Use of System charges depends on which of the following circumstances apply:-

- a) **Users of more than 1MW:** Customers whose demand exceeds 1MW and authorised generators are charged the full cost of connection. These costs may include amounts for the installation of the appropriate additional metering and for the costs of operating and maintaining the NIE connection assets.
- b) **Standard connection charges:** These charges apply to new housing developments of 12 or more dwellings, and for extensions to existing developments of fewer dwellings. The connection charge in these cases is a standard £257 per dwelling with any remaining costs recovered via Use of System charges.
- c) **Users of less than 1MW:** This category covers the remainder of domestic customers and small business customers. These customers are charged 60% of the total cost of connection with the remaining 40% recovered via Use of System charges.

While connection charges tend to vary with geographical location, Use of System charges do not. For example, (excluding circumstances where the standard connection charge applies) the connection charge for a typical domestic customer building a dwelling in a rural area will generally tend to be higher than for the same customer in an urban area, but a uniform Use of System charge applies.

ORIGINS OF THE PRESENT SYSTEM

The basis of the existing connection charge policy is mostly historical. The current system of charges dates back to the 1980s and was devised in the context of a monopoly distribution and supply system. Charging structures were similar throughout the U.K., although NIE is now the only electricity utility to continue with this particular connection charge policy. In the Republic of Ireland customers typically pay 50% of the cost of connection with the remaining 50% recovered via Use of System charges.

One reason for customers not being charged 100% of the cost of connection up-front was to encourage connections to the electricity system. If the immediate cost of connection to the customer was reduced it was believed that this would increase the number of connections. The split between the up-front payment and the amount to be recovered through Use of System charges has varied over time but has remained fixed since privatisation. It is now not known why the share of connection charges to be recovered through Use of System charges was set at 40%. The standard connection charge of £257 per dwelling for housing developments of more than 12 dwellings is also the result of historical precedent.

WHY CHANGE?

NIE has requested the Director's approval for a change in policy because of a number of concerns with the existing policy which gives rise to the following effects:-

a) **Cross-subsidies:**

The existence of the standard connection charge and the 60 per cent rule means that expensive connections generally attract a greater level of support from the Use of System tariff than low cost connections, even though the same Use of System tariff may apply. In other words, customers with expensive connections receive a higher subsidy than customers with less expensive connections. A numerical example may help explain this. Take for example customer 1 who requires a new connection for a domestic dwelling in a rural area which costs £2,000 in total. Under the current system customer 1 is required to pay 60% i.e. £1,200 and NIE 40% or £800 (this money is recovered by NIE through Use of System charges). Customer 2 requires a new connection in an urban area which costs £500 in total so customer 2 pays £300 and NIE £200 (which is again recovered through Use of System charges). In this example customer 1 has received a subsidy of £800 and customer 2 a subsidy of £200 but both will pay exactly the same Use of System charges.

b) **Higher Use of System charges:**

The different policy which applies in NI means that NIE's connection charges are below the GB norm. This difference in policy contributes to higher Use of System charges in Northern Ireland than in Great Britain, and the longer the different policy applies the greater the effect will be. It must be pointed out however that only a small proportion of the current divergence can be accounted for in this way (currently about 1% of a divergence in Use of System charges of 46%).

c) **Inhibition of competition in connections:**

NIE and The Director have been discussing arrangements to facilitate the introduction of competition in connections so customers can have a choice as to who provides their connection. NIE has put forward proposals for the introduction of competition in connections. However, NIE argues that the standard connection charge and, to a lesser extent, the 60 per cent rule, act as a barrier to the emergence of competition.

WHAT ARE THE OPTIONS FOR CONNECTION CHARGES?

As the beneficiary it would appear equitable that customers should pay the full cost of connection, including any reinforcement costs, up front in their connection charge. However, since customers will pay future Use of System charges which include an element to cover the costs of general system reinforcement, this option would lead to customers paying twice for any system assets which are remunerated through Use of System charges - and this would be inequitable.

An option at the other end of the scale is the situation where the full cost of connection is recovered via the Use of System charge. Since all customers within a particular tariff category pay the same Use of System charge this leads to the situation where less expensive connections would be subsidising more expensive connections, which would again be unacceptable. Using the same example at part a above the subsidy now becomes £2,000 for customer 1 and £500 for customer 2.

The existing connection charge policy attempts to minimise the cross subsidy that would otherwise occur if the connection costs were wholly covered by Use of System tariffs. However NIE's point is that the current policy leads to a level of support from Use of System tariffs which is significantly higher than the level necessary to minimise the cross subsidy.

NIE believe a more equitable arrangement is to provide an allowance based on the cost of reinforcing those parts of the network which are included in the connection but which are intended to be financed through the Use of System tariff. This is the basis of NIE's proposed new policy.

THE PROPOSED POLICY

The policy NIE is proposing to move to is a new system which has been referred to as 'Tariff Support'. NIE claim that the move to Tariff Support will encourage competition in connections, and will encourage more efficient decision making by developers, which will be to the benefit of customers in NI. The new system is also regarded as being more equitable in its treatment of new connections.

HOW TARIFF SUPPORT WORKS

The new policy proposed by NIE would mean that customers will be charged the full cost of connection less an allowance which would reflect the reinforcement element of Use of System tariffs to be paid by the customer over future years. This allowance is known as the 'Tariff Support'. An estimate of the level of Tariff Support that will be paid to different classes of customers is shown in Appendix 1. The aim of Tariff Support is to remove the cross subsidies which arise under the existing policy while avoiding the double-counting problem outlined above. The actual impact in monetary terms of changing to a policy based on Tariff Support can be seen from Table 1 (below). As can be seen from Table 1, the level of connection charges will go up for the majority of new customers.

TABLE 1^(a) Impact on Connection Charges

Type of Scheme	Average Connection Charge per dwelling		% increase/decrease	Estimated Numbers of connections p.a.
	Existing Policy	Proposed Policy		
Domestic (< 12 houses)				
Service only	£225	£359	+60%	1,588
LV Main	£311	£417	+34%	763
Urban sub	£468	£676	+44%	28
Urban HV	£692	£1,022	+48%	22
HV Rural	£969	£1,397	+44%	1,082
Housing Developments (>12 Houses)				
Service only	£257	£123	-52%	518
LV Main	£257	£235	-9%	3,487
Urban sub	£257	£234	-9%	1,178
Urban HV	£257	£396	+54%	4,129
HV Rural	£257	£260	+1%	937
Commercial/industrial /increased load	£2279	£3229	42%	1475

(a) The figures in Table 1 in respect of the new policy have not been approved by the Director .

THE IMPACT ON ELECTRICITY BILLS

NIE's allowed Use of System revenue is calculated under the price control mechanism, and the current price control runs from 1997/98 to 2001/02. The price control allows NIE a rate of return on their assets, an allowance for depreciation of their assets, and an allowance for operating costs. Connection charges paid by customers are not included within the present price control, these are subtracted from the total asset expenditure figure to give a net asset expenditure figure on which NIE earn their return.

NIE estimates that following the completion of connections work which was quoted at the "old rates" the new policy would increase overall connection charges by £2.6m per annum. It is estimated that it will take two or three years for the full effects of the new policy to be seen, as some customers will already have quotations based on the old arrangements. The increases in Years 1 and 2 immediately following the implementation of the new policy are estimated at £1.6m and £2.2m respectively.

This increase in customer contributions will have the effect of reducing the amount of revenue that has to be raised from Use of System charges which are paid by customers as part of their electricity bills. Assuming that customer contributions to connection charges increase by £2.6m it has been calculated (under current conditions) that customers as a whole would save £5.8m in Use of Systems charges over the lifetime i.e. 40 years of one year's avoided assets. If NIE's

allowed rate of return on assets is reduced the savings will be lower and higher if the rate of return increases.

The argument that total costs will decrease as a result of the new policy is totally dependant on no new network expenditure “filling” the space provided by the increase in up-front connection costs. In practice this would be impossible to guarantee except perhaps by notionally continuing the existing policy at periodic price controls when constructing capex.

COMPETITION IN CONNECTIONS

NIE believes that the standard connection charge and, to a lesser extent the 60% rule inhibits the emergence of competition in connections. Under the new policy, charges would be more cost-reflective and the Tariff Support allowance would be payable to the customer regardless of who actually carries out the connection work. This would enable independent contractors to compete on equal terms with NIE. Although not all connection work would be open to competition NIE estimates that the proportion of the connection work (by cost) which would be open to competition would be around 76 per cent. The introduction of this new policy would require a new licence condition for NIE which would require them to indicate in their Connection Charging Statement which activities are open to competition (contestable) and which are not open to competition (non-contestable).

The following gives a guide to the breakdown between contestable and non-contestable work as envisaged by NIE.

Contestable Work

1. The provision and installation of plant, line and cabling to accommodate a new customer.
2. LV jointing (including live jointing in new developments)
3. LV service alterations to single customers (including meterboard alterations)
4. Procurement and provision of materials
5. Excavation and reinstatement
6. Recording of work and location of cable routes and equipment on site and provision of this information to NIE
7. Making provision for the installation of metering equipment

Non-contestable Work

8. Specification of the connection and the materials which will be used

9. Obtaining of any necessary wayleaves and consents
10. Processing the application and planning the connection
11. Design, specification and carrying out of any reinforcement work on the existing system
12. Determination of the point of connection
13. Connection to the existing system and energising
14. Removal or movement of existing assets
15. Approval of the design, specification and method of installation; inspection, monitoring and testing prior to connection to the system

A recent consultation paper by Ofgem¹ outlined their proposals on the split between contestable and non-contestable work in GB. Comparing these proposals with NIE's shows us that points 8,13,14 and 15 will all be open to competition in GB when Ofgem's proposals have been implemented. This will mean that the scope of work initially open to competition in NI will be less than the scope of work open to competition in GB. NIE state that there are a number of good reasons why competition in NI cannot be introduced at the same level as the current GB proposals and these reasons are detailed below:

- Competition in connections has been in operation in GB for a number of years. Although this has not been particularly successful thus far all the processes required for its operation such as adoption agreements are in place and are well established. It is a much easier task to extend out from this to take in other areas. In NI no such arrangements are in place and these would need to be established from scratch. This will involve a steep learning curve for customers, contractors and NIE.
- A number of GB RECs have major concerns with some aspects of the Ofgem proposals (for example specification of plant and materials) and a number of working groups have been established to work through these. NIE would share these concerns, however assuming agreement can be reached NIE would seek to be consistent in the definition of the scope of contestable work.

NIE say that they have proposed a staged approach to the introduction of competition of connections with the initial scope detailed above. If the areas of concern with the current Ofgem proposals are resolved, and all the processes have bedded in satisfactorily, NIE propose to increase the scope of work open to competition and make the areas of contestable work consistent with GB over a period of 24 months.

NIE believe that competition in the provision of new connections may lead to greater efficiency

¹ "Competition in Connections to Electricity Distribution Systems: Ofgem's Proposals", Ofgem, July 2000. This document can be accessed on the Ofgem website www.ofgem.gov.uk

and therefore lower prices. As such it could offer the same level of protection against overcharging to the customer, that the regulatory system currently provides, more efficiently.

ENCOURAGING MORE EFFICIENT DECISION MAKING BY DEVELOPERS

NIE consider that if connection charges were more cost reflective this would provide developers with an incentive to take account of the full cost implications of their decisions. This can be expected to result in the following efficiency savings, which would reduce the total cost of connection (including the cost of work done by the developer):-

- developers would have an incentive to take account of the full cost implications of alternative substation sites within new estates;
- developers might be able to perform certain tasks more efficiently simply because they are already on site, for example construction of substation buildings and digging trenches;
- developers would have an incentive to dig trenches and install ducts during construction. This would reduce the total cost since the developer would not need to rely on hand digging to avoid existing services and there would be less need to have to break up roads or footpaths;
- developers would take account of connection costs in the same way as they evaluate the cost of roads in designing the layout of an estate; and
- where an area is to be developed in phases, the developers will have an incentive to pass on information about subsequent phases so that NIE can achieve the least cost design for the development as a whole;
- developers would be incentivised to consider alternatives such as cost effective on site renewables.

By providing cost reflective signals, further savings may be achieved in ways which cannot be anticipated at this stage.

DISTRIBUTIONAL ISSUE

Redistribution of income between new and old customers:

If we assume that the new policy comes into place this will mean that new customers will generally receive a smaller subsidy than customers have in the past for the same type of connection. This will mean that pre-change customers will have received a larger subsidy when they were connected, but will not have to contribute to a similar size of subsidy to new customers. New customers on the other hand receive a smaller subsidy (in most cases), but will still have to contribute to the larger subsidy received by pre-change customers in the past, through inflated Use of System charges. The effect of this will diminish over time as the number of customers connected under the old policy diminishes.

EXPLAINING THE NEW CHARGING ARRANGEMENTS TO CUSTOMERS

NIE considers that the information it intends to provide to customers is relatively straightforward to understand. NIE has stated that it intends to include a schedule in its Statement of Connection charges to give the background and explain the principles used in the calculation of Tariff Support allowances. In addition the schedule would set out the level of tariff support allowance for various categories of domestic and non-domestic connections.

Since the vast majority of connections involve contractors who will soon become experienced in these matters, understanding the new policy is unlikely to be a substantial difficulty. Experience from GB confirms that this is unlikely to be a major concern to customers: for example, RECs have found that housing developers could readily understand the concept by analogy with other site-variable costs such as roadways.

THE VIEWS OF THE DIRECTOR

NIE has presented some sound arguments in favour of the new connection charge policy which they have proposed. These new proposals however raise some important issues which require public consultation.

The new connection charge policy is undoubtedly more cost reflective, facilitates competition more easily than the existing policy, and will eventually reduce bills through reduced Use of System charges. It also has the additional advantage of bringing the system in NI into line with the system in GB.

Against this, the new policy will increase the cost to the customer concerned of new connections and will be more complex for customers to understand.

The matter of whether the new policy is indeed equitable or not is a matter of judgement. It is more equitable in the sense that the person who imposes the additional costs on the system by requesting the connection will pay these costs. However the change in policy has a very important distributional implication i.e. as explained above it involves new customers subsidising existing customers.

It may be possible to reduce the impact of new customers subsidising old ones by introducing an interim measure between the old connection charge policy and Tariff Support. This interim measure could gradually increase the proportion of costs paid by new customers under the current policy (e.g. from 60% paid by the customer to 62%, 64%....) so new customers eventually faced costs which were closer to Tariff Support. This gradual phasing of the policy would reduce the cross subsidy between new and old customers.

Competition in the provision of new connections may also be possible even with the existing policy. This would mean that the customer would pay the independent contractor 60% of the cost of connection with the remaining 40% paid to the contractor by NIE. However the new policy proposed by NIE does make competition much easier to achieve.

The benefits of competition to the electricity consumer also need to be taken into account and may not be great enough to merit a change in policy. GB introduced a system similar to that proposed by NIE in April 1995 but the results to date have been disappointing, and Ofgem have recently issued a consultation paper on competition in connections with a view to improving the effectiveness of competition (this paper has been referred to already).

The introduction of competition in connections in GB has in some cases led to an increase in connection charges. This has been highlighted by a number of street-lighting Authorities in GB and Ofgem's recent paper addresses this point directly. The increase in the number of connection charge determinations required from Ofgem could also be taken as evidence of overcharging on the part of companies providing new connections. The Director would be keen to see additional savings to customers (in terms of the total cost of the new connection) from the new proposals as opposed to increasing costs.

At present in GB aggregate PES revenues from the provision of connections is just under £300m a year compared to around £8m in Northern Ireland. The fact that competition has had limited success in a large market like GB makes The Director sceptical about how successful competition in connections it is likely to be in Northern Ireland.

SUMMARY

The advantages, disadvantages of the proposed new connection charge policy and the distributional issues which it raises may be summarised as follows:-

Advantages

- It is more cost reflective
- It is more equitable for new connections in the sense that customers with higher cost connections pay higher connection charges
- It encourages more efficient decision making by developers through location signals
- It facilitates competition in connections
- It will lead to reduced Use of Systems bills for customers.
- It will bring the NI system more into line with GB

Disadvantages

- New connections under 1 MW will generally face a higher connection charge
- The new policy may not be as simple for customers to understand
- New customers would generally pay a higher connection charge than customers who had connected under the old policy, while they would still contribute to the subsidy which those pre-change customers will continue to receive.

CONSULTATION

The Director is not committed to either the status quo or the proposed changes. The fairest and most economically efficient connection charging policy may combine elements of change and continuity. It does not have to be a 'zero sum game' in which one set of customers are worse off in order to make another set better off. Ideally we should be seeking an outcome which reduces total electricity costs and leads to greater efficiencies and savings which can be shared.

Responses are invited to the following questions. Any additional matters which interested parties consider important will be considered by the Director in forming a judgement on the proposed policy change.

1. What are your views on the current connection charge policy, do you think it requires changing?
2. Would customers have any objection to the proposed connection charge policy? Do its advantages outweigh its disadvantages?
3. Is competition in connections likely?
 - (i) If so what savings are reasonably achievable?
4. Would introducing competition in the provision of connections but keeping the existing charging system be preferable?
 - (i) Why should competition not work under the old system equally well?
 - (ii) Should this be tested before the connection policy is changed?
5. Should an interim system be introduced (to reduce cross subsidies) along the lines suggested above?

Appendix 1

Tariff Support Allowances

Type of Dwelling	Type of Connection							
	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7 and 8	Type 9
	£/Dwelling	£/Dwelling	£/Dwelling	£/Dwelling	£/Dwelling	£/Dwelling	£/Dwelling	£/Dwelling
Flats	0	48	97	152	164	177	201	250
Terrace	0	58	117	183	198	213	242	301
Semi	0	80	160	252	272	292	333	414
Detached	0	136	271	426	461	495	563	700

Types of Connection

- Type 1 :-** Service only
- Type 2 :-** Services and LV mains extension from existing LV main
- Type 3 :-** Services and LV mains from existing distribution substation or Pole Mounted Transformer
- Type 4 :-** Services, (possibly LV mains), substation, single circuit minimal extension from existing HV network.
- Type 5 :-** Services, (possibly LV mains), substation and duplicate circuit minimal extension from existing HV network
- Type 6 :-** Services, (possibly LV mains), substation, single circuit extension from existing HV network
- Type 7 :-** Services, (possibly LV mains), substation, duplicate circuit extension from existing HV network
- Type 8 :-** Services, (possibly LV mains), substation, single HV feeder from existing 33/11 kV substation.
- Type 9 :-** Services, (possibly LV mains), substation, dual HV feeder connection from existing 33/11 kV substation.