the POWER to Connect

LAING energy

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20 June 2005

Dear Mark

Response to Ofgem Consultation Paper 135/05 "Structure of electricity distribution charges: Consultation on the longer term charging framework"

Laing Energy Limited (LE) welcomes the opportunity to respond to Ofgem's consultation on the longer term charging framework. Our detailed comments are attached as an appendix to this letter. In summary our views are as follows:

- We support the development of a forward looking Long Run Incremental Cost model. However, care needs to be taken to ensure that customers do not have to pay again for services they have paid for as a connection charge under earlier arrangements.
- Work needs to ensure that income and cost drivers are consistent with those used in the regulatory price control. A model of high complexity and precision will not produce outputs of any greater accuracy than those from a simpler model if data available to populate the model is either incomplete or of uncertain quality.
- The application of shallow connection charging boundaries needs to ensure consistent treatment of deeper costs, irrespective of who provides or owns the downstream assets. Current treatment unduly discriminates against non DNO parties in respect to the provision of new connections.
- In general, locational signals should be given through the connection charge. However, locational signals through DUoS charges may be appropriate in some limited circumstances.
- DUoS charges for generation should only be levied in exceptional circumstances. In the longer term embedded generation will bring benefits to distributors. Mechanisms for rewarding generators who provide benefits still need to be developed.
- A review on the cost reflectivity of existing DUoS tariff structures is appropriate. However, given the lack of development of tariffs since privatisation, the enthusiasm and incentives for such work is questionable.

- The mechanism where the IDNO pays upstream DNO DUoS charges on behalf of suppliers places an unfair financial burden on the IDNO. Such arrangements are inconsistent with those in place for transmission and for licence exempt distributors. Where IDNOs are required to recover a DNOs charges in respect of suppliers' use of upstream DNOs assets they are in effect acting as a collection agent and should therefore be compensated, not penalised through additional cash flow burden, credit cover requirements placed on them by the upstream DNO, or through uncovered risk of supplier default.
- Significant work is still required to develop and implement the charging frameworks. To ensure that this is achieved clearly defined objectives, milestones and timescales need to be put in place. Any industry groups established to develop new charging models and structures should be open to all parties (DNOs, IDNOS suppliers and customer representatives) so that frameworks are developed in a transparent, collaborative way.

We will be pleased to meet with you to expand and explain in more detail the issues raised in this letter and the attached appendix.

Yours sincerely,

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Laing Energy Detailed Comments to Ofgem Consultation:

Structure of Electricity Distribution Charges

Consultation on the Longer Term Charging Framework (May 2005 135/05)

Type of Charging Model

1. We agree with the principle that in the longer term the charging model should be forward looking and should be based on the Long Run Incremental Cost (LRIC). However, we believe that the pricing messages put forward by such models may be skewed or distorted by the need to recover costs invested historically. This is particularly important where there is a fundamental shift in the methodologies, frameworks and policies used to make investment decisions and recover costs. Existing customers who have paid connection charges under one charging model, possibly including charges for capitalised operation and maintenance, will be concerned if they are to be charged again through a revised DUoS charging methodology.

2. We support the principle that charges should be determined by demand load flows. However, we note that in developing a charging model a number of assumptions will need to be used and the data required to populate the model may be incomplete or of uncertain quality. As such any model with sophisticated levels of complexity and precision would not provide outputs of any greater accuracy than those that would be provided by a simpler model. Therefore, we would advocate a simple model that is straight forward to implement and that reflects the availability and quality of information required to populate it.

Locational Variation

3. Typically, only in exceptional circumstances are demand customers influenced by locational charges. In most cases other investment considerations will swamp the message put forward by locational signals for electricity. Such considerations will include property values, planning considerations, availability of labour and other resources, communication links and potential grants or assistance from agencies. Nonetheless, this does not negate the argument that customers who are responsible for costs should be the ones that pay the costs. Therefore, we believe it is appropriate that locational signals should be given. These should be primarily through the connection charge; however, there may be scope for the development of zonal DUoS charges in limited circumstances.

4. In the case of generation, connection charges form a much larger part of the investment decision. Providing the locational message through the connection charge promotes economic and efficient investment in developing the network. Previous feedback from generators (and investors in generation schemes) suggests that deferring some of the connection charge by levying generation DUoS doesn't help the investment decision if the Net Present Value of providing the connection isn't reduced. Some comment that deferred charges have a higher risk and therefore, are more likely to hinder the investment decision. A better way of incentivising distributed generation is to ensure that they are able to share in the benefits that they bring. This is discussed later.

5. In respect of existing arrangements we note that:

   - Ofgem's consultation identifies that some distributors have already abandoned the DRM (a cost based model) in favour of a revenue based model.

- A lack of transparency and predictability in charging models leads to a lack of confidence in the fairness of charging models between different voltage levels and different customer types.
- The application of the shallow connection charging principles can distort the treatment of costs for new connections depending on whether assets are provided by the DNO, by an IDNO, or by a competition in connections provider.
- The benefits of embedded generation are not fully recognised in DUoS charging.
- The use of old REC tariff structures may no longer be fully cost reflective between customer types and temporal variations in demand.

Consistency between Charging Models and Price Control

6. The key cost drivers for investment are capacity, standards of security, and in the case of generation, fault levels. Additionally, DNOs are subject to regulatory price control and this determines how, where and what income a DNO can recover. Therefore this income driver impacts significantly on how and where a distributor will invest and incur costs. As such the longer term charging frameworks and models used in setting regulatory price controls need to be closely linked. This may include aligning the time frames and cost/ income drivers used in setting regulatory price controls more closely with those in any LRIC model.

7. Regulatory price control reviews take a static snapshot of the costs and incomes of ex-PES DNOs in setting allowances for the succeeding five years. Each DNO will respond to the drivers in the price control and run its business in order to maximise their allowed income. Examples of this are the incentives placed on distributors in respect of quality of supply, distributed generation and the undergrounding of networks in areas of outstanding natural beauty.

8. The current price control mechanism can lead to step changes in charges at the start of a new price control review (an issue that was of concern to some suppliers with the recent price control). We believe a charging framework that takes a rolling five year view and reviewed annually would provide less volatility, more predictability in prices and would allow closer linkage to charging frameworks. Since systems and regularised processes would be established, the collection of data on an ongoing basis would be simpler and more robust.

9. It is essential that there is a level playing field in place: effective, transparent charging methodologies and statements play a key part in demonstrating this. As an IDNO, LE connects its networks to the networks of other DNOs. In doing this it is important that we are able to understand and predict accurately the charges from upstream DNOs. Without transparent methodologies and frameworks we would be concerned that the charges from DNOs may be distorted by voltage level, location or by customer type.

10. Any distortion in the apportionment of connection and/or use of system charges between different voltage levels or between different customer types may be discriminatory and may lead to IDNO margins being unfairly squeezed. This would compromise the competitive position of LE.

Connection Charging Boundary

11. In principle we support the shallow connection boundary; however, we are concerned that its application is discriminatory and that it potentially distorts competition. Our understanding is that the shallow connection boundary requires that:

    - Assets provided for sole use are fully charged.
    - Assets provided which have shared use have a proportionate charge.
    - The cost of assets provided at more than voltage level above the connecting voltage will not be recovered through the connection charge.

12. The development of this model means that shallow connection assets no longer receive tariff support. However, tariff support is still provided in respect of deeper connection assets where the associated costs are not fully recovered through the connection charge. It is assumed that where costs are recovered through the tariff they will be allocated at the voltage level at which they are incurred, i.e. EHV costs not recovered through the connection charge will be recovered through the EHV component of the tariff (even though the customer may be supplied at HV or LV). To do otherwise would amount to a cross subsidy between charges at different voltage levels and would lead to distortions in cost reflectivity.

13. Unless site specific tariffs are applied, any tariff support provided in respect of deeper connection costs will be recovered through use of system charges levied on all of the DNO's customer base. This is irrespective of the number of new customers the deeper assets provide connections to, i.e. the level of tariff support is not determined by the number of new MPANs. However, the connection charging boundary applied by the DNO, and therefore the level of tariff support provided, is determined by who provides and operates the downstream shallower assets of the new connection.

14. Consider a development which may require assets to be provided to enable multiple connections to domestic premises. The provision of the connection may require assets at more than one voltage level above the voltage of connection, EHV works at a primary substation for instance. If the DNO provides all of the assets the connection costs associated with EHV costs will not be charged to the developer. This scenario is illustrated in Figure 1 below.

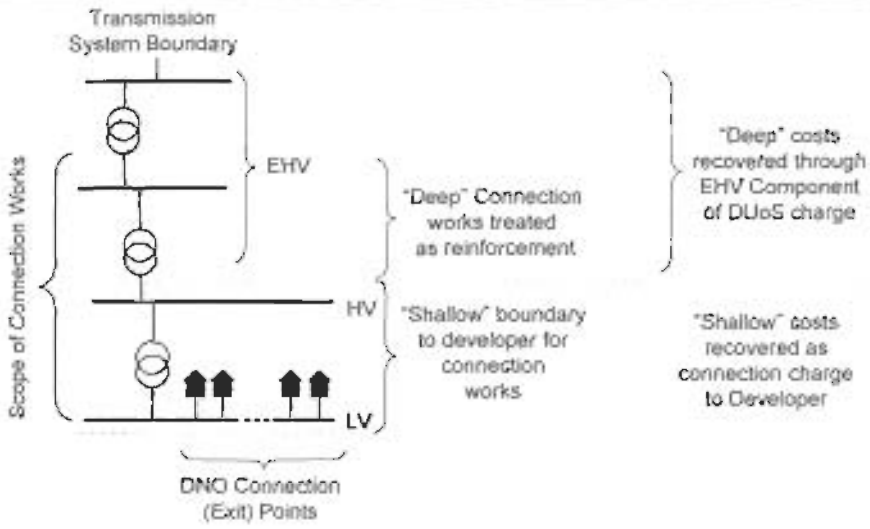

Figure 1. Connection Charge Boundary where DNO provides all of Connection Works

15. Consider the same development where the infrastructure is provided by an IDNO and where the IDNO requires a high voltage connection from the DNO at the primary substation (Figure 2). The connection works provided by the IDNO may be identical to those that the DNO would have provided; similarly, the EHV works provided by the DNO to connect the IDNO network may be identical to those required had the DNO provided the downstream network. Also, the voltage of connection to end customers (via the DNO network) is still at LV.

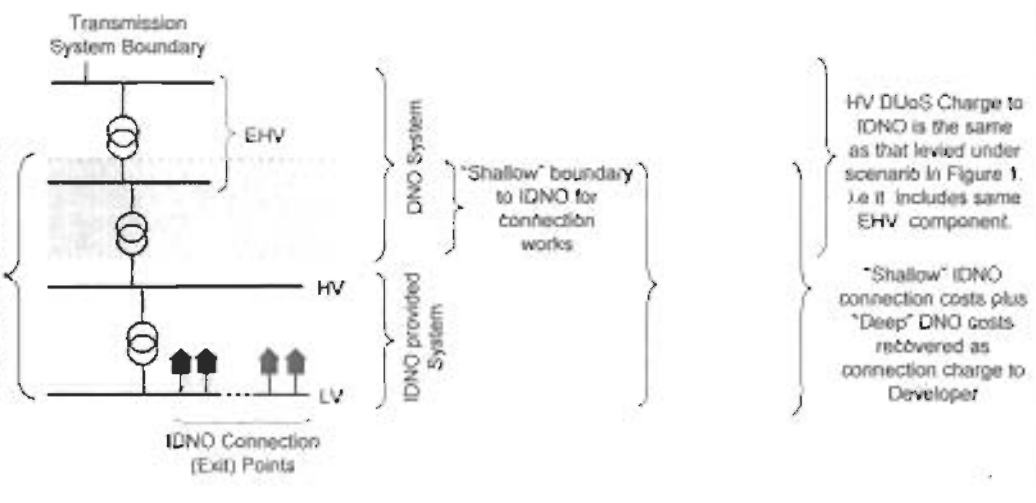

Figure 2. Connection Charge Boundary where IDNO provides Connection Works

16. In considering the IDNO connection request, the DNO will include the cost of the EHV works in calculating the connection charge, arguing that they are less than one voltage level above the voltage of connection (HV). As such the total connection costs due to the end customer or developer will comprise of the EHV connection costs levied by the DNO (all or in part depending on shared usage rules), together with the shallower connection costs of the IDNO.

17. However, DUoS charges to the IDNO will include the same EHV component as would be included in the DUoS charges had the DNO provided the downstream assets. Therefore, in addition to paying for the EHV reinforcement costs as part of the connection charge, the IDNO, and ultimately end customers, will be paying for them through DUoS charges too. This means that such costs are potentially charged twice.

18. DNOs may comment that their treatment of the IDNO is consistent with the treatment of other customers; however, it is inescapable that the differential treatment by the DNO in charging for the EHV assets within its connection charges to the IDNO (but not charging where it provides the downstream assets) amounts to undue discrimination and has the effect of distorting competition in favour of the DNO.

Tariff Structures

19. Charges for use of system should be split between fixed and variable charges. Although network investment is driven by capacity, units distributed still provide a good proxy for demand in respect of deeper assets shared by many customers. Also, they are still a key component in the regulatory price control and are therefore an important income driver. Fixed charges become more appropriate in respect of shallow assets because they relate more to a customer's specific use of those assets. Further work is required to determine what the split between the fixed and variable components of charges should be.

20. In respect of tariff development:

- DUoS tariff structures have not faced any fundamental change since privatisation.
- Competition in supply has not led to suppliers (or distributors) pushing for new tariff structures.
- DUoS pricing messages in the tariff may be lost when they are bundled in with supply charges.

21. Although consumption is profiled in the non-half hourly market, the development of DUoS tariffs that allow standard settlement configurations with a greater number of contiguous time pattern regimes would allow energy to be allocated to different periods for profiling. This would allow a supplier to develop tariffs that give more cost reflective pricing messages. However, suppliers have not pushed for such tariffs and other tariffs, such as Weekend /Evening, or off peak heating (other than the basic Economy 7 style of tariff), are no longer offered by some distributors. Research is required to determine whether existing DUoS tariff structures are cost reflective and the level of enthusiasm and incentives for suppliers, distributors and customers to develop new tariffs.

22. At present reactive power charges can only be levied where customers have Code of Practice 5 metering (or better) fitted and where customers' consumption is traded in the

half hourly market. If such charges are to apply to a broader range of customers, including those in the non-half hourly market, then changes will be required to metering Code of Practice 6 requirements and to the data flows used in to provide settlement information. This would require changes to settlement systems and to the billing systems of suppliers and distributors. Such changes and the associated costs need to be evaluated in determining the benefits of introducing reactive charges on a wider scale.

Generator Charging

23. Newberry supports symmetry between demand and generation. However, stating the obvious, the primary purpose of a distribution network is to facilitate the supply of electricity to consumers. Without consumers the need for generators would disappear. At present consumers' supply requirements are met by generators connected to the transmission system with distributors transporting electricity from the transmission system boundary down to consumers' premises. The connection of embedded generators substitutes the need to transport electricity from the transmission system to demand customers and in the longer term reduces a DNOs costs. As such generators should be required to pay DUoS only in exceptional circumstances; for example, where they deliver energy onto the transmission system.

24. Also, in respect of connection to NGC's transmission system, it is suppliers that are charged for the transport of electricity onto the distribution network. It is difficult to understand why the same principle should not apply in respect of distributed generators. In both instances generated electricity is transported onto the distribution network.

25. Current industry arrangements fail to reward embedded generators for the reduction in costs that they bring to a distributor by substituting the need to transport electricity from the transmission system. Existing industry arrangements work on the assumption that all generated output is delivered to the transmission system and that all energy required by demand customers will be transported from the distribution system. (See figure 3).

26. From an energy trading perspective the settlements process corrects for the output from an embedded generator by inflating the generated output by the DNO's loss adjustment factors. This assumes that the generated output reduces distribution losses by reducing the need for electricity to be transported to demand customers from the transmission system. If, for example, a DNO system has loss factors of 10% in respect of domestic premises, then in order to deliver 100kWh to a customer the supplier will require 110kWh to be provided at the transmission boundary. If an adjacent premises generates100kWh of energy it is assumed that the output will be used locally, removing the need for electricity to be delivered from the transmission system. Therefore the generator is credited with the saved losses.

27. In some circumstances generators may be located where the output cannot be used locally and where it must be transported to the transmission system. In such instances the distributor will incur losses. At present the settlement system is unable to take full account of such circumstances.

28. For generation connected from 1 April 2005 the distributor may levy generation DUoS charges in respect of those costs not recovered through connection charges. This is treated separately from Demand DUoS. Demand DUoS is charged to customers on the assumption that all energy is transported from the transmission boundary. Where a customer's demand requirement is partly or wholly met by adjacent micro generation the DUoS charges levied on the customer's supplier will assume that all electricity used has been delivered from the transmission system. Even though such arrangements could reduce the need for a DNO to carry out further reinforcement or investment the generator receives no reward for substituting the need to transport electricity from the transmission system.

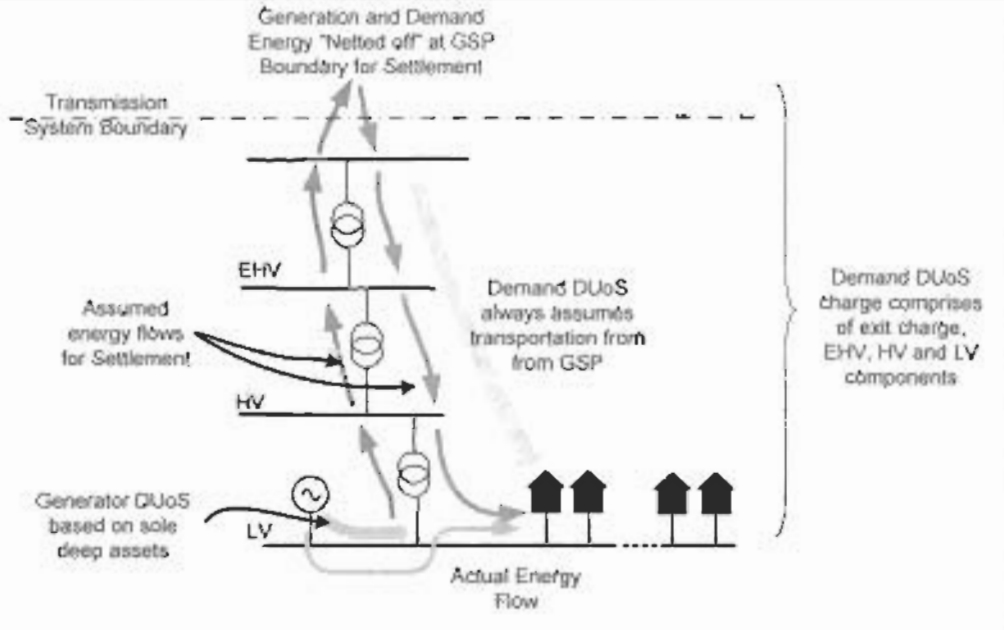

Figure 3. Current Industry Arrangements for Embedded Generators

29. If the generator is connected to an IDNO network, in respect of upstream DUoS charges, the generator output is aggregated with customer demand at the boundary between the IDNO and DNO network. Therefore, embedded generators and suppliers have the potential to share in the benefit from reductions in upstream charges. However, if an IDNO becomes a net exporter and the exported energy is used locally by the DNO, the IDNO will not receive payment for the export. In such cases the IDNO would have no benefits to share with generator.

IDNO Charges and Methodologies

30. We have previously commented in detail on charges and methodologies in our response to Ofgems publication ***"Regulation of Independent Electricity Distribution Network Operators Initial Proposals Document - January 2005 18/05"***. This response is on Ofgem's website. In summary, although we support the current mechanism of linking IDNO charges to the DNO, we are concerned that distortions in charges levied by DNOs could seriously compromise an IDNO's competitive position and the charges it

levies in respect of its customers. We have given one example above where such a distortion could occur. This is where o DNO would recover deeper connection costs through their tariff from their whole customer base (say circa 2 million customers), but where the IDNO would be charged those costs as a connection charge where it provides the connections. Clearly, if the IDNO is to recover the same costs through its tariff charges f o much smaller customer base then it will have a disproportionate impact on the DUOS charges. Levying such charges as a connection charge would comprise the IDNO in competing with DNOs for new connections.

31. Typically, an IDNO's charges will be dominated by upstream DUoS charges by the DNO. Therefore, if an IDNO is to set its charges using the incumbent DNOs charge to equivalent domestic customers as a benchmark, it is critical that the DNO charges to the IDNO are fully transparent, cost reflective and appropriate. It must be possible to demonstrate that the allocation of costs and the charges are not unduly distorted between connections to different customer classes or between connections at different voltage levels. Such charges must not unfairly prejudice an IDNO seeking to make connections to a DNO network when compared to similar connections provided by the incumbent DNO.

32. Charging arrangements currently in place require that the IDNO pays the upstream DNO's DUoS charges in respect of suppliers' use of the upstream DNO's distribution system. The IDNO then has to recover those charges from the supplier through its own DUoS charges. In effect IDNO acts as a collection agent for the upstream DNO. In doing this the IDNO is not rewarded for:

- any cash flow burden it must bear as a result of time lags between paying the upstream DNO charges and suppliers paying the IDNO DUoS charges.
- the additional commercial risk of a supplier defaulting in respect of upstream DNO charges.

If IDNOs are not compensated in some way for bearing the risk of upstream DNO charges it has to be questioned why IDNOs should be required to take any risk and, for example, afford suppliers any credit limits in respect of upstream DNO charges.

33. Whilst we recognise that settlement processes and systems are currently unable to provide data to upstream DNOs we do not accept that this justifies the rationale that an IDNO should bear a disproportionate financial burden and risk for suppliers' use of upstream DNO networks. Such arrangements are inconsistent with those in place for transmission (where the supplier, and not the downstream distributor, takes liability for TUoS) and for licence exempt distributors (again where the supplier has the liability for upstream DNO charges).

34. Credit cover requirements in respect of IDNOs have yet to be confirmed. However, we assume that Ofgem will expect IDNOs to offer credit limits to suppliers on the same basis as those offered by DNOs. Therefore we believe that the IDNO should be allowed to recover fully the costs incurred where suppliers default. This is consistent with the poss through arrangements being established with DNOs. Any increase in an upstream DNOs charges to recover bad debt as a pass through will not automatically create sufficient headroom for the IDNO to increase its charges to recover ony bad debt. This

is because the customer and supplier mix on an IDNO network will be different to that of the upstream DNO. Also, as well as recovering charges for its own system, the IDNO may have to recover charges for use of the upstream DNO network.

Implementation

35. A substantial amount of work that is still required to develop, agree and flesh out the thinking of what the longer term charging frameworks should be. To ensure that such a framework is developed and implemented in a co-ordinated and timely manner it is important that objectives, milestones and timescales are established at the outset. If this is not done the momentum and focus in delivering solutions may wane and the final solution may be significantly watered down from the initial intentions.

36. We agree that some of the work should be co-ordinated centrally by an industry group. Where such a group is established it is important that it is open to all parties (DNOs, IDNOs and suppliers), has a clear structure and clear terms of reference to ensure transparency and full consideration of views of different parties. Since the longer term frameworks impact on customers it may be appropriate that customer representatives and Ofgem be invited to attend.

37. To facilitate the process it may be appropriate for meetings to be hosted by Ofgem but for an independent chair to be selected by the group. Given that work is already being considered for centralised commercial governance it may be appropriate for such a group to report back through the Distribution Commercial Forum.