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**MODIFICATION PROPOSAL ENW/2009/004.2**

**Electricity North West Limited**

Proposal to implement an Interim LDNO  
charging methodology and charges

Date of Issue: 25 September 2009

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**FOR APPROVAL BY THE GAS AND ELECTRICITY MARKETS AUTHORITY**

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## 1. Introduction

Electricity North West Limited (ENW) remains committed to introducing new charging arrangements for Licensed Distribution Network Operators (LDNO) and, over the last twelve months, has actively participated in a working group, facilitated by Ofgem, and including all LDNOs. The aim of this working group has been to develop an interim charging methodology for LDNOs to be implemented by each distribution network operator pending the introduction of a common charging methodology, mandated by Ofgem by way of a collective licence modification.

ENW currently charges Licensed Distribution Network Operators (LDNOs) who connect to ENW's network using our published tariffs for commercial customers. Since July 2008 ENW has proposed two charging modifications to introduce new LDNO specific tariffs. The initial proposal was vetoed by the Authority. The Authority recognised that the proposal had some benefits but its assessment was that there were other aspects of the proposal which outweighed these benefits. The second proposal was based on the methodology developed as part of the Ofgem facilitated IDNO/DNO working group. This proposal was submitted in May 2009 and was based on the DNO net capex cost methodology prepared by Reckon (the Reckon methodology) which was considered in detail by the working group formed between Ofgem, the DNOs and IDNOs on the appropriate method of setting IDNO tariffs. ENW continues to consider the Reckon methodology to be robust.

Notwithstanding that ENW continues to consider the Reckon-based approach to be preferable, ENW agreed to withdraw its proposal in early September 2009 during the Ofgem consultation and decision period as the proposed methodology is different to the proposed methodology within the Common Distribution Charging Methodology (CDCM).

This revised modification proposal seeks the introduction of interim LDNO tariffs for the period to 1 April 2010. As requested by Ofgem, this has been developed in accordance with the methodology produced by the working group and is consistent with the approach defined within the CDCM.

## 2. Description of the modification

### 2.1 The proposed methodology

ENW has based its interim LDNO charging methodology on the "net capital expenditure" approach discussed at the industry working group and submitted as part of the CDCM by all the distribution services providers.

The methodology calculates a discount percentage to be applied to ENW's All-The-Way tariffs to reflect an estimate of the 'as efficient' costs of the networks provided by the LDNO. The methodology is set out in the following three-step procedure:

#### **Step 1**

The first step is to calculate the percentage of total distribution costs in each level of our network, and to calculate the proportion of the costs allocated to each network tier which are directly attributable to distribution activity in that network tier and those which represent an allocation of indirect costs. For the

purpose of LDNO charging we split our network into the four network levels of LV, HV/LV, HV and EHV. The allocation methodology is described below.

### **Allocation of revenues to network levels**

To calculate the network level percentage allocations we calculate separate network level percentages for (i) the operating cost; and (ii) depreciation and return on capital elements of our allowed revenue. The final network level percentages are a weighted average of all of these. In order to allocate our revenues to network levels, we use allocation drivers calculated from the following sources:

1. a breakdown of price control allowed revenue over the period 2005/06 to 2009/10 between operating expenditure, depreciation and return on regulatory asset value (RAV);
2. 2007/08 RRP data on units distributed and operating expenditure broken down by network level; and
3. DPCR5 Future Business Plan Questionnaire data on elements of capex and customer contributions for the period 2005/06 to 2014/15, broken down by network level, and on gross Modern Equivalent Asset Values (MEAV) for various asset types.

*Operating expenditure* - The RRP data allows us to distinguish between direct and indirect costs of operating expenditure, with direct costs allocated directly to network levels. Thus a direct operating costs percentage for each network level can be established from the RRP data. The indirect operating costs are allocated to network levels on the basis of MEAV. The overall operating cost percentage for each level is a weighted average of the direct and indirect percentages. Estimated gross MEA used for this purpose were derived from asset counts and unit costs from the FBPQ. Where unit cost data were not available from the FBPQ, an estimate prepared by PB Power for Ofgem was used instead.

*Depreciation and return on capital* - Both the depreciation and return on capital elements of allowed revenue were allocated to network levels on the basis of net capex data derived from the FBPQ. All figures were aggregated over the 10 year period 2005/06 to 2014/15, taking in actual data or forecasts for each year as available.

For each network level, net capex was calculated by adding up total condition based replacement (proactive and reactive) replacement, combined in the case of LV, HV and EHV with connections spend minus customer contributions for connections at that network level, general reinforcement capex at that network level, and fault reinforcement capex at that network level. Some of these categories explicitly identify HV substation and HV/LV transformer costs. These costs (and no other costs) are allocated to the HV/LV network level. Some of the expenditure categories do not separately identify HV substation and HV/LV transformation costs. For these categories costs are allocated to the HV/LV in the same proportion as for the other categories (where these costs are separately identified).

As the LDNO tariffs relate to demand customers we have not included a generation capex calculation of the percentage of net capex attributable to each network level.

At HV for the predominately domestic tariff the HV/LV substation costs can be identified in the MEAV split, the direct costs and our FBPQ data allowing the

exclusion of these costs. It is infrequent that IDNO connections for predominately domestic developments result in the IDNO constructing HV network extensions, therefore only the HV/LV transformation level has been considered in formulating this tariff at this time.

These allocations of the operating expenditure, depreciation and return elements of allowed revenue are combined using weights from the price control breakdown.

These allocations are then rescaled by the estimated number of units flowing through each network level.

Finally, for operating expenditure attributed to LV, a breakdown is made between direct and indirect expenditure, using the proportions from the analysis of RRP data.

### **Step 2**

The second step is to determine the proportion<sup>1</sup> of the LV network that is typically used by an embedded network, relative to the amount of LV network used by a typical domestic customer.

This proportion is based on the following information:

- the average LV network length to the embedded network connection per embedded network end user; and
- the average LV network length per LV end user on the LDNO network, estimated as the average LV network length per LV end user on the DNO network.

ENW has reviewed the data that it has on the embedded networks connected to its distribution network. Analysis of all<sup>2</sup> 48 sites in ENW's DSA shows that the total length from ENW's distribution substation to the LDNO connection point is 9,296 metres. These sites had a total of 3,568 customers. Therefore the average LV network length per LDNO customer is 2.61 metres.

The average LV network length per LV end user is calculated as 13.08 metres, using the data from the RRP tables. An LDNO has also indicated to ENW that the LDNO's average LV network length per customer is in the range of 15 metres which is consistent with our expectations for LV developments.

The output from the second step is a single percentage, representing the proportion of the LV network that, on average, LV-connected embedded networks use in respect of each end user, relative to the amount of LV network used by ENW's LV end users. This figure rounded is 84%<sup>3</sup>. This percentage is used to reduce the direct proportion of the LV allocation to reflect the split of LV costs between our network and average LDNO embedded network.

### **Step 3**

The third step is to combine steps 1 and 2 above in order to determine the discount to apply in the calculation of embedded network tariffs.

Embedded networks connected at LV receive a discount equal to the LV network level allocation, described in step 2 above, after the direct proportion

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<sup>1</sup> This approach was classified as option 4 in a paper presented to the industry working group on 5 March 2009.

<sup>2</sup> All the sites with the relevant information as at December 2008.

<sup>3</sup> Result from the calculation,  $13.08 / (2.61 + 13.08)$ .

of the allocation has been adjusted for the LV split. Effectively the LDNO is charged for all amounts allocated to HV/LV, HV or EHV, and for the direct costs associated the average proportion of our network provided used by each LDNO end user.

Embedded distribution networks connected at HV receive a discount equal to the sum of the LV and HV/LV percentage network allocations.

## 2.2 Structure of the new LDNO tariffs

LDNOs are currently charged on a site-by-site basis using metering installed at the boundary of the LDNO network. As ENW does not know what type of customers will connect to the LDNO network, it is for the LDNO to determine the most appropriate tariff to request at the boundary based on the type of customers it plans to connect. As these customers may also be commercial, ENW will continue to make tariffs for commercial customers available to LDNOs as part of this interim proposal.

ENW proposes to offer the following three tariff arrangements for the interim period:

### Existing Boundary Tariffs

ENW will continue to offer the current commercial tariff set to LDNOs connecting embedded networks to its distribution network.

### New Boundary Tariffs

Alongside the current commercial tariffs ENW will make available the following additional boundary tariffs:

- LV Connected with predominantly Domestic Unrestricted customers;
- LV Connected with predominantly Domestic Economy 7 customers;
- HV Connected with predominantly Domestic Unrestricted customers; and
- HV Connected with predominantly Domestic Economy 7 customers.

The above listed tariffs have the same structure as ENW's Domestic Unrestricted and Economy 7 tariffs.

### Portfolio Tariffs

The Ofgem facilitated industry working group also developed tariffs for embedded networks based on a portfolio approach. This involves applying embedded network charges on the basis of the same tariff components as our other charges, applied to the number and load data for the users on the embedded network.

The main advantage of a portfolio approach is that it helps demonstrate compliance with competition objectives, and better caters for developments which comprise different types of customer. It will help demonstrate that all new developments can benefit from competition between potential network operators by addressing perceived discrepancies in tariff structures between standard All-The-Way charges and the applicable boundary charges. This approach could also reduce the interface costs associated with LDNOs.

ENW will introduce the following portfolio tariffs as part of this proposal:

**Figure 1: Illustrative Portfolio Tariffs**

End User Tariff	Voltage of Connection	
	LV	HV
UD	Y	Y
E7	Y	Y
PC3	Y	Y
PC4	Y	Y
PC5 – 8	Y	Y
HH LV	Y	Y
Unmetered	Y	Y

The portfolio approach requires the provision of data about the users on embedded networks in order to calculate charges for the use of ENW's distribution system. ENW will introduce portfolio tariffs in the interim period which LDNOs may use as an alternative to boundary tariffs. These portfolio tariffs will only be available to LDNOs who can provide the data necessary to bill on that basis, to the satisfaction of ENW. The information required is shown in Appendix A.

### 2.3 Metering Requirements and Data Provision

For the avoidance of doubt boundary meters will still be required to be fitted, at an LDNO's cost, in accordance with Ofgem's current requirements for reporting units<sup>4</sup>, until such time as an alternative approach for reporting such units has been agreed with Ofgem.

Until alternative arrangements are agreed all DNO/LDNO network interface points are to be metered, and that metering must have the capability to provide all data necessary for use of system billing as set out above.

Where metering is required at the network interface points the LDNO will provide the metering equipment assets and arrange for its installation. The LDNO will also be responsible for the maintenance of the metering equipment and its continuing accuracy to the standards set out in the Balancing and Settlement Code (BSC) and related procedures. Any person(s) appointed by the LDNO to provide, install and maintain the metering equipment must be accredited to undertake said activities under the relevant clauses from the BSC and Meter Operation Code of Practice Agreement (MOCOPA).

For new LDNO embedded network sites involving boundary metering connected at EHV or at HV the metering equipment will have four-quadrant capability and half-hour active and reactive consumption/generation measuring capability.

LDNOs must provide information necessary to allow accurate bills to be produced on a monthly basis, with actual readings provided at least once

<sup>4</sup> SI 3263/2001 The Electricity (Unmetered Supply) Regulations 2001. See also 'Regulation of Independent Electricity Distribution Network Operators', Ofgem Decision document 176/05, July 2005, at paragraphs 4.13 to 4.21.

every six months. All billing data should be provided within five working days of the calendar month end.

### **3. Reasons for the change with an explanation of how the proposed change better meets the relevant objectives**

These proposals build on the previous proposals from ENW to introduce new LDNO tariffs and specifically address the concerns raised by Ofgem in its November 2008 veto decision<sup>5</sup>. As noted in Section 1 of this proposal, ENW has also specifically addressed Ofgem's request that ENW should develop a methodology consistent with the CDCM.

- (a) Ofgem had concerns about imposing a two-rate tariff on LDNOs serving mainly domestic premises on an unrestricted tariff. This issue has been resolved by introducing more LDNO tariffs to enable the LDNO to choose a tariff which better reflects the end users connected to its networks. This revised approach to determining the LDNO tariffs will also ensure that no individual tariff components will exceed the All The Way tariff components that an LDNO can levy.
- (b) Ofgem had concerns regarding the mismatch of tariff structures. The proposal also addresses this issue as discussed in (a) above.
- (c) Ofgem noted that the proposals did not offer commercial LDNO tariffs: these tariffs are now available under this proposal.
- (d) Finally, Ofgem considered that there was not enough detail within the description of the method to fully understand its effects. A more detailed description has been included in this modification proposal and the methodology itself was developed in an industry working group (including all distribution licensees) facilitated by Ofgem.

ENW's initial modification proposal included banded charges which reflected the distance from the LDNO connection on the ENW network to the feeding substation. As a result of the analysis in Appendix B we have re-evaluated this approach and no longer consider it appropriate to use it. This is because the approach took no account of the size of the development and numbers of customers being connected by the LDNO and therefore did not address the proportion of the network that the LDNO is providing per customer compared to ENW. This approach therefore may not have correctly reflected costs.

ENW must demonstrate that any proposed changes to its charging methodology better meets the relevant objectives set out in SLC 13.3 of the distribution licence. This justification is set out below.

#### **3.1 Competition**

Relevant objective 13.3(b)<sup>6</sup>, states "that compliance with the use of system charging methodology ... does not restrict, distort, or prevent competition in the transmission or distribution of electricity".

The introduction of new LDNOs' tariffs that closely match the structure of ENW's tariffs to end users, which the LDNOs must not exceed, will remove any potential mismatch in tariff structures which could limit the income available to LDNOs and will ensure that a sufficient margin continues to be available. The proposals therefore better meet relevant objective 13.3(b).

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<sup>5</sup> Ofgem decision letter, relating to ENW/2009/001.1, dated 12 November 2008

<sup>6</sup> SLC 13.3(b).

### 3.2 Cost reflectivity

Relevant objective 13.3(c)<sup>7</sup>, requires “that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable (taking account of implementation costs), the costs incurred by the licensee in its distribution business”.

The current approach to LDNO tariffs of using commercial tariffs for medium or large commercial users is appropriately cost-reflective. However, the introduction of specific LDNO tariffs based on the end user tariffs of the customers that an LDNO is serving and identifying the ‘as efficient’ costs of the network provided by the LDNO will represent a further improvement in cost-reflectivity. The proposals therefore better meet relevant objective 13.3(c).

### 3.3 Consultation with users

The methodology has been developed in an industry working group, facilitated by Ofgem, which included all distribution licensees.

In its second modification proposal<sup>8</sup> on LDNO charging methodology ENW based its interim LDNO charging methodology on the “net capital expenditure” approach discussed at the industry working group. We chose not to base our methodology on the original “top down” approach devised by the working group as a preference was indicated by LDNOs in the industry working group for a net capex approach, which provides greater margins to the LDNOs. Nor did we choose to base our interim methodology on the alternative “replacement expenditure adjuster” approach for two reasons: the first is that the methodology was devised outside the industry working group and has not received the appropriate scrutiny from the LDNOs and Ofgem; and second, although ENW understands the principle that the approach is trying to achieve, it is concerned that the methodology and its results do not in fact deliver upon that principle.

However, for the reasons outlined in Section 1 of this proposal ENW’s second modification proposal, ENW/2009/004.1, was withdrawn during the Ofgem consultation and decision period as the distribution service providers had submitted the CDCM which included a price control disaggregation approach. ENW is concerned over the volatility of the LDNO tariffs across the two price control periods and has decided to harmonise its approach by seeking adoption of the price control disaggregation methodology in the interim period. Utilising this approach now ensures consistency of approach for EHV connected customers as ENW has raised, at the Ofgem facilitated IDNO/DN working group, the extension of the price control disaggregation approach for application to EHV embedded networks.

ENW remains concerned that the net capex approach for estimating ‘as efficient’ costs in fact over-estimates these costs. The allocation of revenues attributable to assets is in the same proportion as capex (which is what creates these assets in the first instance) and risks allocating insufficient revenue to the network levels at which significant general reinforcement expenditure is required. New LV network assets are largely covered by customer contributions, so that almost all capex (net of contributions) at LV comes from asset replacement. New HV, EHV and 132kV network assets are not generally covered by customer contributions to the same extent, so that a substantial part

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<sup>7</sup> SLC 13.3(c).

<sup>8</sup> ENW/2009/004.1

of capex (net of contributions) at these network levels comes from general reinforcement involving the provision of new capital by the network operator. This approach will over time lead to an over-allocation of costs to LV users in general and an unjustifiable increase in the charges to these users.

ENW played an active role in the development of the methodology devised in the industry working group and it had intended to be able to implement the developed methodology on the 1 April 2009. Regrettably, this was not possible due to the time that has been required to develop a common methodology and the fact that the working group has not yet reached agreement on this. Therefore, ENW intends to make the new LDNO tariffs available on a retrospective basis as of 1 April 2009. Appendix D contains information on the impact of the change.

#### 4. Proposed Changes

ENW proposes to introduce:

- a new section 4 in its Use of System Charging Methodology statement and renumber the subsequent section; and
- a new Table 3.8 detailing the new LDNO tariffs in its Use of System Charging statement and add a section of accompanying notes for the application of these tariffs.

Appendices E1 and E2 contain the proposed changes.

#### 5. Proposed illustrative structure and charges

Figure 2 and Figure 3 below shows the set of illustrative IDNO Boundary Tariffs and the set of illustrative IDNO Portfolio Tariffs respectively:

**Figure 2: Boundary Tariffs**

LDNO Boundary Tariff	Tariff Components	Voltage of Connection	
		LV	HV
Embedded networks with Dom Unres customers	Fixed Charge, p/MPAN/day	3.55	2.93
	Unit Rate, p/kWh	0.865	0.714
Embedded networks with E7 customers	Fixed Charge, p/MPAN/day	3.55	2.93
	Day Unit Rate, p/kWh	0.983	0.811
	Night Unit Rate, p/kWh	0.077	0.063

**Figure 3: Portfolio Tariffs**

End User Tariff	Tariff Components	Voltage of Connection	
		LV	HV
Domestic Unrestricted	Fixed Charge, p/MPAN/day	3.55	2.93
	Unit Rate, p/kWh	0.865	0.714
Domestic E7	Fixed Charge, p/MPAN/day	3.55	2.93
	Day Unit Rate, p/kWh	0.983	0.811
	Night Unit Rate, p/kWh	0.077	0.063
PC3	Fixed Charge, p/MPAN/day	5.76	4.75
	Unit Rate, p/kWh	0.865	0.714
PC4	Fixed Charge, p/MPAN/day	5.76	4.75
	Day Unit Rate, p/kWh	0.956	0.788
	Night Unit Rate, p/kWh	0.063	0.052
PC5 – 8	Fixed Charge, p/MPAN/day	32.01	26.41
	Capacity charge, p/kVA/day	0.310	0.255
	Day Unit Rate, p/kWh	0.265	0.219
	Night Unit Rate, p/kWh	0.063	0.052
LV MD HH	Fixed Charge, p/MPAN/day	57.10	47.11
	Capacity charge, p/kVA/day	0.310	0.255
	Day Unit Rate, p/kWh	0.265	0.219
	Night Unit Rate, p/kWh	0.063	0.052
Unmetered	Fixed Charge, p/MPAN/day	581.72	479.96
	Demand charge, p/kW/day	12.590	10.387

**6. A timetable for the implementation of the modification and charges changes**

ENW intends to publish the amended Licence Condition Statements within one week following a non-veto decision from the Authority and will implement the proposed changes as soon as practical. ENW will seek agreement with the LDNOs, under the Distribution Connection and Use of System Agreement arrangements, to implement the new proposals at the earliest possible date and apply the new LDNO charges on a back-dated basis as of 1 April 2009.

## Appendix A: Data requirements for portfolio billing

For each monthly billing period each IDNO will send to ENW the following information derived from the settlement data-flows. The aggregated settlement data provided shall indicate reconciliation adjustments from previous settlement runs in order to identify the adjustments made in settlements.

**Figure A1: Template of data required for portfolio billing**

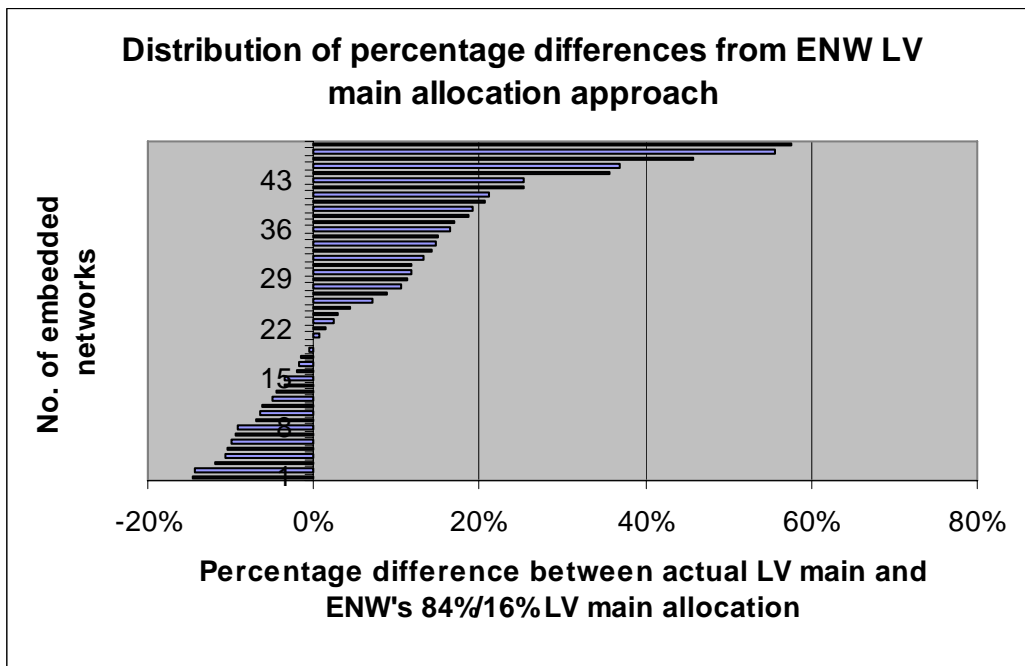
LLFC	Number of MPANs	Day Units	Night Units	Total Maximum Capacity	Total Maximum Demand
<b>LV</b>					
UD				n/a	n/a
E7				n/a	n/a
PC3				n/a	n/a
PC4				n/a	n/a
PC5 – 8					
HH LV					
Unmetered	n/a	n/a	n/a	n/a	
<b>Total LV</b>					
<b>HV</b>					
UD				n/a	n/a
E7				n/a	n/a
PC3				n/a	n/a
PC4				n/a	n/a
PC5 – 8					
HH LV					
Unmetered	n/a	n/a	n/a	n/a	
<b>Total HV</b>					

The above table is populated with aggregated data for each LDNO and supplied to ENW every month.

**Appendix B: Supporting analysis for ENW's LV main allocation approach**

For each of the embedded networks connected to ENW's distribution network at LV ENW has recorded the distance (i.e. the LV main employed) from ENW's feeding substation to the LDNO connection. This data was used in the calculation of the LV main split in Step 2 of Section 2 above. ENW has also used this data to compare the results of applying ENW's allocation approach to the banding approach (currently applied by WPD). Figures B1 and B2 below illustrate the under/over estimation of the LV network provided by an LDNO for the two approaches.

**Figure B1: Results from the comparison of ENW's LV main allocation against the actual LV main sharing for each site**



**Figure B2: Results from the comparison of banding approach against the actual LV main for each site**

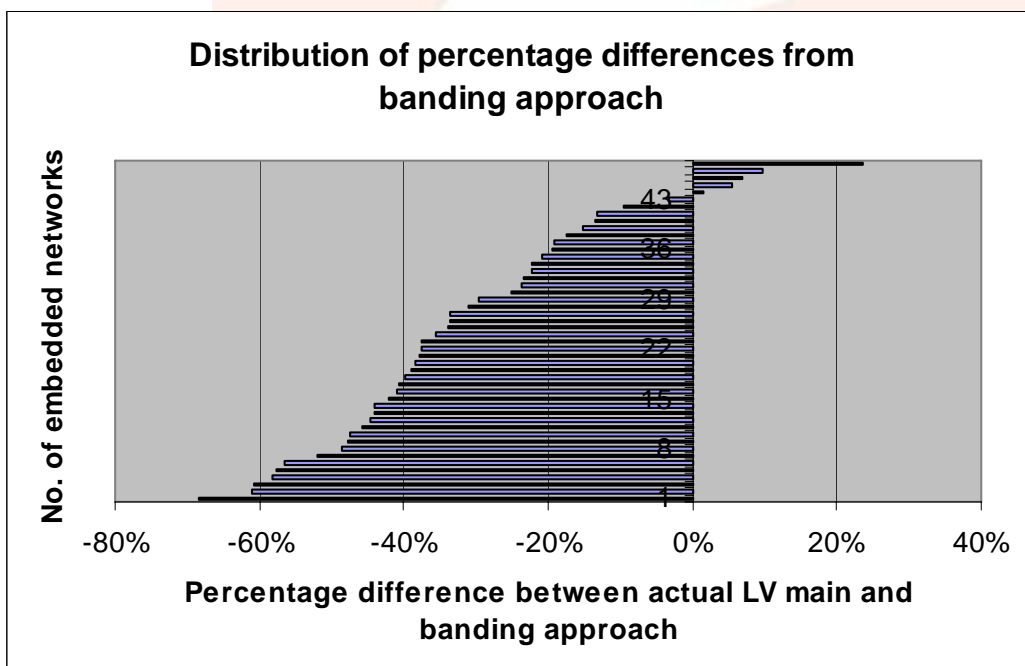
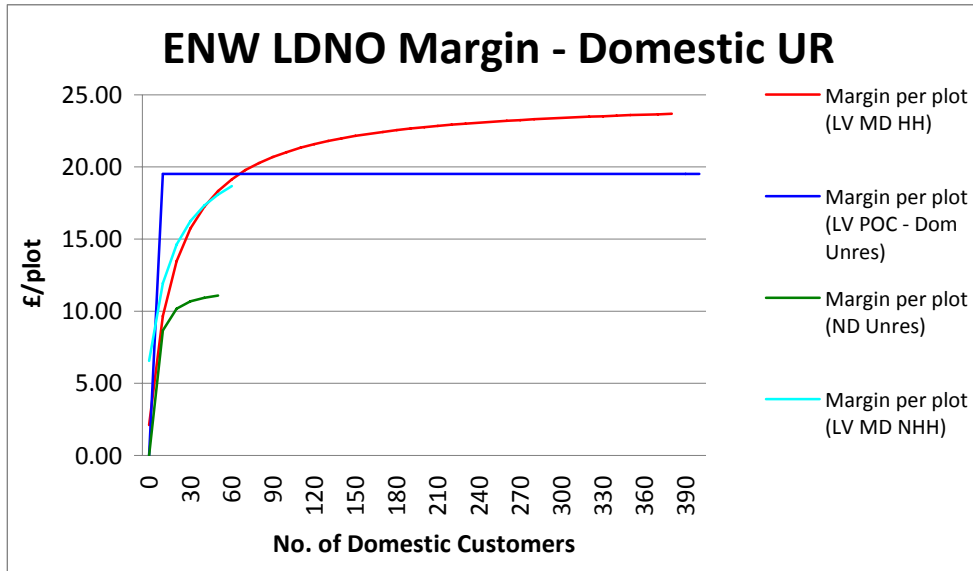


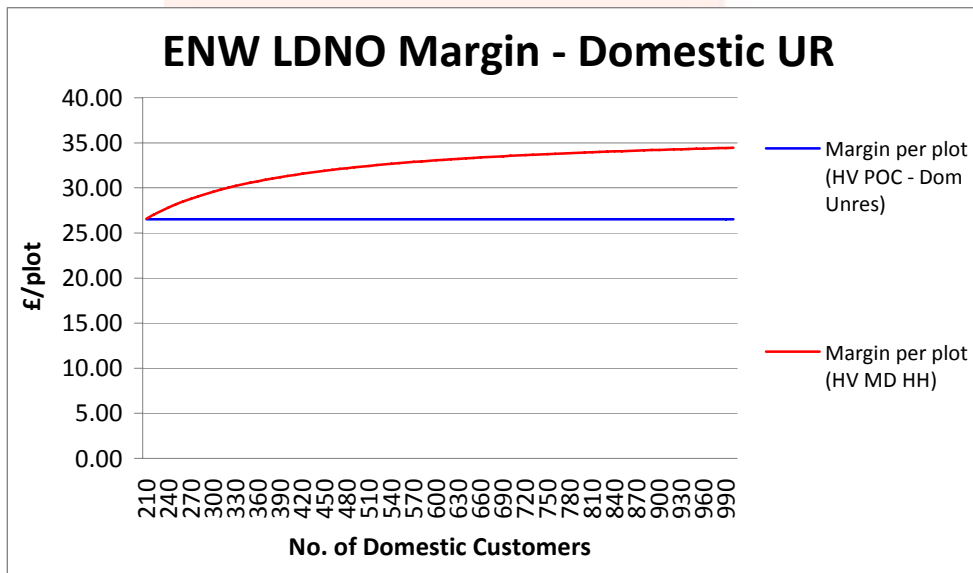
Figure B1 above shows that for a large proportion of embedded network connections to ENW's distribution network ENW's allocation of LV main over-estimates the amount of LV network provided by the LDNOs; and for a smaller proportion ENW's approach under-estimates the amount of LV network provided by the LDNO. Importantly, this analysis shows that, on average, there is no systematic error in the approach. In contrast, Figure B2 above shows that the banding approach systematically under-estimates the amount of LV network provided by an LDNO as in only a few cases does the banding approach over-estimate the amount of LV network provided by an LDNO. This analysis raises concerns over the cost reflectiveness of the banding approach which, if applied, has the potential to distort competition in distribution.

**Appendix C: Illustrative margins for a notional LDNO development**

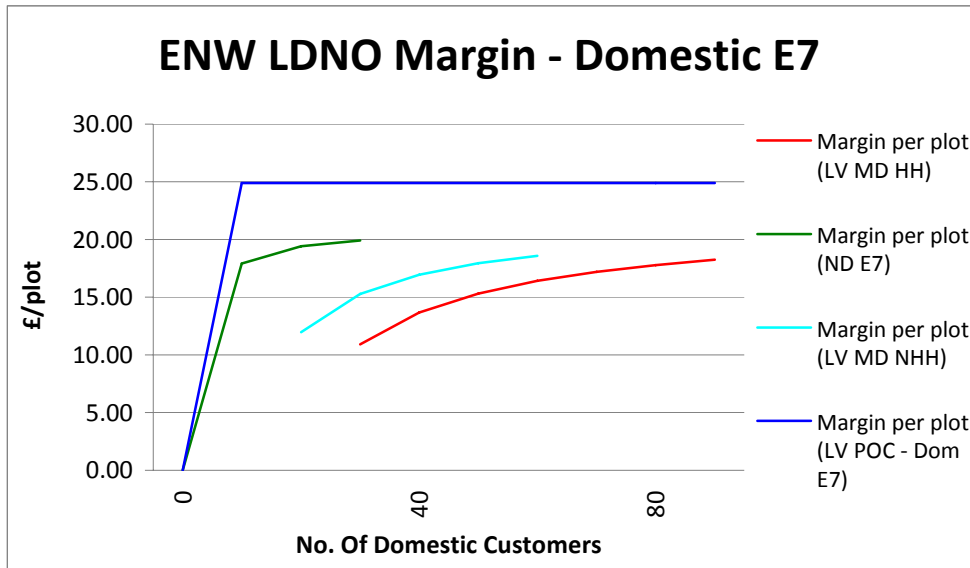
**Figure C1: LDNO margin per customer for end customers on Domestic Unrestricted tariff with embedded networks connected at LV using proposed LDNO boundary tariffs**



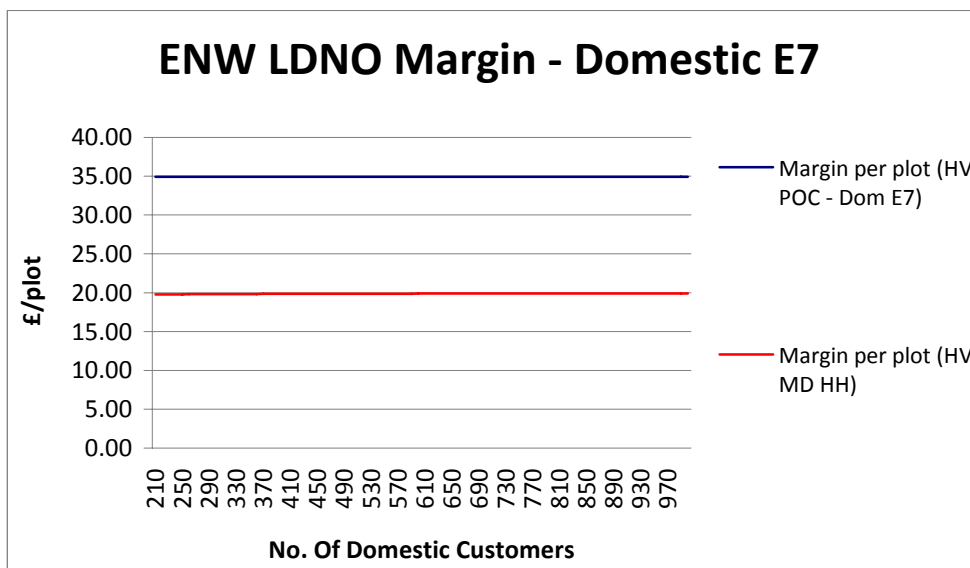
**Figure C2: LDNO margin per customer for end customers on Domestic Unrestricted tariff with embedded networks connected at HV using proposed LDNO boundary tariffs**



**Figure C3: LDNO margin per customer for end customers on Domestic Economy tariff with embedded networks connected at LV and HV using proposed LDNO boundary tariffs**



**Figure C4: LDNO margin per customer for end customers on Domestic Economy tariff with embedded networks connected at HV using proposed LDNO boundary tariffs**



## **Appendix D: Impact of tariff change on income**

If the arrangements proposed in this modification proposal are implemented an LDNO will be able to choose the tariff applicable to each of its embedded networks or to apply the portfolio tariffs across all its embedded networks, provided it is able to disclose the data necessary for ENW to bill use of system charges. It is not for ENW to prescribe which approach should be applied to the disclosure of this data as the LDNOs are best placed to make the choice.

If the LDNOs choose to continue with the current tariff and billing arrangements then there will be no change to the budgeted income expected from LDNOs, *ceritus paribus*. This option is a strong possibility.

It is difficult to predict the income ENW would expect to receive from the existing (or future) connected LDNO embedded networks as it has little or no information on the type of end customers connected to the networks. Assuming that all of the currently-connected embedded networks were fully developed and the LDNOs choose to adopt any of the new arrangements proposed in this modification then ENW expects to receive a small reduction in income from its LDNO customers. ENW expects there will be no or minimal impact on its other customers.

## Appendix E: Proposed changes to Licence Condition Statements

### E1 Use of System Charging Methodology Statement

The following sections detail the proposed changes to Use of System Charging Methodology Statement for the introduction of new LDNO tariffs.

## 4. Use of System Methodology – LDNO Charges

- 4.1 The methodology to calculate LDNO tariffs is designed to secure cost reflectivity by understanding the costs incurred at each network level.
- 4.2 ENW is utilising the price control disaggregation methodology developed in the Ofgem facilitated LDNO/DNO Working Group. This methodology calculates a discount percentage which is applied to ENW's All-The-Way tariffs to reflect an estimate of the 'as efficient' costs of the networks provided by an LDNO.

### The Model

- 4.3 The price control disaggregation methodology is outlined in the following three steps:

**Step 1:** The first step is to calculate the percentage of allowed revenue by network level. The allowed revenue is split by operating expenditure, depreciation and return on capital from the DPCR4 settlement, excluding pension deficit payment allowance.

RRP data from 2007/08 is used to determine the percentage allocation of operational costs by network level. Direct costs are reported by network level and indirect costs apportioned on the basis of gross modern equivalent asset value of the network.

DCPR5 forecast data on capex and customer contributions broken down by network level is used to apportion the percentage allocation of depreciation and return on capital by network level.

The final network level percentages are a weighted average of these three elements.

**Step 2:** The second step is to determine the proportion of the LV network that is typically used by an embedded network, relative to the amount of LV network used by a typical domestic customer. This proportion is based on the following information:

- the average LV network length to the embedded network connection per embedded network end user; and
- the average LV network length per LV end user on the LDNO network, estimated as the average LV network length per LV end user on the DNO network.

This percentage is applied to the LV network percentage derived from step 1 above to derive an overall LV network percentage allocation.

**Step 3:** The third step is the derivation of new LDNO tariffs by applying directly the percentage discount calculated above to the components of each All-the-Way tariff.

### Format of Charges

- 4.4 The structure of LDNO tariffs will match the structure of the ENW tariff applied by the LDNO to its end customers.

- 4.5 For portfolio billing ENW will offer the following LDNO tariffs categorised by end user tariff and voltage of connection:

**Table 1: Set of LDNO portfolio tariffs**

End User Tariff	Voltage of Connection	
	LV	HV
UD	Y	Y
E7	Y	Y
PC3	Y	Y
PC4	Y	Y
PC5 – 8	Y	Y
HH LV	Y	Y
Unmetered	Y	Y

- 4.6 For site-specific billing ENW will offer the following LDNO boundary tariffs in addition to the existing tariffs applied to LDNO embedded networks:

**Table 2: Set of LDNO boundary tariffs**

Boundary Tariff	Voltage of Connection	
	LV	HV
LDNO network with predominantly Domestic Unrestricted customers	Y	Y
LDNO network with predominantly Domestic E7 customers	Y	Y

## D2 Use of System Charging Statement

The following sections detail the proposed changes to Use of System Charging Statement for the introduction of new LDNO tariffs. The new table 3.8 to be embedded within Section 3 of the statement is shown below.

### UoS Charges for Licensed Distributor Connections – available from 1 April 2009

**Table 3.8 Licensed Distributor Tariffs for embedded distribution networks**

A Licensed Distributor connecting to ENW’s distribution network may choose from the following types of tariffs.

#### Boundary

Description	LLFC	Market	PC	Fixed charge (p/site/month)	Day unit Charge (p/kWh)	Night unit Charge (p/kWh)	Other unit charge (p/kWh)	UMS charge £/kW/month	Reactive Power charge (p/kVArh)	Tariff closed to new customers
LDNO network connected at LV predominantly serving Domestic Unrestricted customers	n/a	LDNO	n/a							N
LDNO network connected at HV predominantly serving Domestic Unrestricted customers	n/a	LDNO	n/a							N
LDNO network connected at LV predominantly serving Domestic E7 customers	n/a	LDNO	n/a							N
LDNO network connected at HV predominantly serving Domestic E7 customers	n/a	LDNO	n/a							N

#### Accompanying Notes

- The criteria for deciding suitability are:
  - a) Above tariffs only applicable to Licensed Distributor connections, servicing only domestic customers;
  - b) All LDNO network interface points are to be metered, and that metering must have the capability to provide all data necessary for billing the use of system charges set out above;
  - c) An LDNO is to provide information necessary to allow accurate bills to be produced on a monthly basis, with actual readings provided at least once every six months;
  - d) All billing data is to be provided within five working days of the calendar month end.

- All LDNO network interface points are to be metered:
  - At all LDNO network interface points the metering equipment is to have the capability to record day and night units and the site’s maximum demand; and
  - At HV LDNO network interface points the metering equipment is to have four-quadrant capability and half-hour active and reactive consumption/generation measuring capability.
- No excess reactive power charges will be applied to the above tariffs.

**Portfolio**

Description	LLFC	Market	PC	Fixed charge (p/site/month)	Day unit Charge (p/kWh)	Night unit Charge (p/kWh)	Other unit charge (p/kWh)	UMS charge £/kW/month	Reactive Power charge (p/kVArh)	Tariff closed to new customers
LDNO network connected at LV serving a Domestic Unrestricted customer	n/a	LDNO	n/a							N
LDNO network connected at HV serving a Domestic Unrestricted customer	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N
	n/a	LDNO	n/a							N

## Accompanying Notes

- The criteria for deciding suitability are:
  - a) Above tariffs only applicable to Licensed Distributor connections;
  - b) An LDNO is to provide information necessary to allow accurate bills to be produced on a monthly basis, with actual readings provided at least once every six months;
  - c) For each monthly billing period each LDNO is to send to ENW information derived from the settlement data-flows and the LDNO's billing engine. The aggregated settlement data provided shall indicate reconciliation adjustments from previous settlement runs in order to identify the adjustments made in settlements.
  - d) ENW requires the number of MPANs, the day units and night units, the total maximum capacity and total maximum demand (where applicable) for each end user tariff for each voltage of connection for the LDNO network.
  - e) All billing data is to be provided within five working days of the calendar month end.
- All LDNO network interface points are to be metered:
  - At all LDNO network interface points the metering equipment is to have the capability to record day and night units and the site's maximum demand; and
  - At all HV LDNO network interface points the metering equipment is to have four-quadrant capability and half-hour active and reactive consumption/generation measuring capability.