



To distributors, suppliers,
customers and other interested
parties

*Promoting choice and
value for all customers*

8 May 2007

Dear colleague,

**Consultation on use of system charges to new electricity distribution licensees:
WPD and SP proposals**

Electricity Distribution Network Operators (DNOs) have licence obligations¹ to have in place as of 1 April 2005 three charging statements: the statement of use of system (UoS) charging methodology, the statement of UoS charges, and the statement of connection charging methodology. The statement of UoS charging methodology outlines the method by which distribution UoS charges are calculated.

The DNOs are required to keep the methodology under review and bring forward proposals to modify the methodology that they consider better achieves the relevant objectives².

Before making modifications to their charging methodologies the DNO must give the Gas and Electricity Markets Authority (the 'Authority')³ a proposal to modify their methodology stating how the proposal better achieves the relevant objectives. The DNO then makes the modification unless within 28 days the Authority either directs the DNO not to make the modification or notifies the DNO that it intends to consult and then within three months directs the DNO not to make the modification.

Proposals received from Western Power Distribution (WPD) on 21 March, covering both their South West and South Wales areas, and Scottish Power (SP) on 13 April, covering their Manweb and SP Distribution areas, set out to modify the UoS charging methodology in respect of the charges levied on independent DNOs (IDNOs) and out of area DNOs connecting to their system. SP consulted with the industry twice on this issue during 2006. Having carefully considered the issues raised by the proposal, the Authority has decided to consult on the proposed modifications, and formally notified both SP and WPD of this on 16

¹ Standard Licence Conditions (SLC) 4-4B

² The relevant objectives for both the connection and use of system charging methodologies, as contained in paragraph 3 of SLC4B and SLC4 of the distribution licence respectively are:

- (a) that compliance with the use of system charging methodology facilitates the discharge by the licensee of the obligations imposed on it under the Electricity Act 1989 and by this licence;
- (b) that compliance with the use of system charging methodology facilitates competition in generation and supply of electricity, and does not restrict, distort, or prevent competition in the transmission or distribution of electricity;
- (c) 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; and
- (d) that, so far as is consistent with sub-paragraphs (a), (b), and (c), the use of system charging methodology, as far as reasonably practicable, properly takes account of developments in the licensee's distribution business.

³ Ofgem is the office of the Authority. The terms 'Ofgem' and the 'Authority' are used interchangeably in this letter.

April. This letter consults on WPD and SP's proposals to modify their approach to charging IDNOs.

Background to modification proposals

IDNOs and DNOs operating out of area are subject to a price cap under distribution licence condition BA1 and special licence condition G1 respectively. This condition caps end-user charges to domestic customers to that of the host DNO. We consulted on changes to BA1 in 2005 and decided in our August 2006 decision document⁴ not to implement any changes to the current arrangements, stating that we considered that BA1 adequately protected consumers' interests and pointed to the experience in the gas market of the risks of such an approach.

IDNOs, unlike their gas (IGT⁵) counterparts, pay the host DNO's use of system charges. The level of this charge, levied by the DNO at the boundary, is therefore critical to determining an IDNO's gross margin. The IDNO then has to fund its own costs, for example operation and maintenance (O&M) and billing costs.

The DNO sets this boundary charge under certain licence and statutory obligations. As set out above, a DNO's licence requires it to set charges which are cost reflective as far as is reasonably practicable. DNOs are also required to comply with the Competition Act 1998.

DNO charges at HV and LV are based on a geographic average rather than a locationally specific charge. To date, the DNOs have charged IDNOs at the boundary on the basis that they are a commercial customer. However, differences in IDNO profiles and in the structure and level of charges that the IDNO can itself recover from end customers has led to calls for DNOs to change their approach in order to better reflect the costs that IDNOs impose on the DNO's system.

DNO modification proposals

Ofgem has received two modification proposals associated with charges to IDNOs. The proposals are briefly described in **Annex 1**: the detail can be found in the modification proposal reports submitted by WPD and SP which are published on our website⁶.

A discussion of the main issues from these proposals is presented at **Annex 2**. For context, other related issues regarding IDNOs are summarised in **Annex 3** whilst **Annex 4** provides two illustrative examples of the impact of the proposals on charges to IDNOs.

Views sought

The proposed modifications represent a change to the methodology for deriving distribution UoS charges for IDNOs in WPD and SP's distribution areas and cover a range of issues. Our decision on each proposal will be on the basis of whether each proposal (individually) better achieves the relevant licence objectives.

Views are sought on each proposal. We seek views on the following questions in relation to SP and WPD's proposals:

- Does SP's modification proposal better achieve the relevant objectives? Specifically:
 - Are the proposals more cost reflective than the current methodology?

⁴ 'Decision letter on regulation of independent electricity distributors: affiliates of existing licensees and price control issues', 156/06, August 2006, available to view on the Ofgem website.

⁵ Independent Gas Transporters

⁶ At <http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgMods/Pages/DistChrgMods.aspx>

- Does SP demonstrate that its proposals facilitate competition in generation and supply and do not restrict, distort or prevent competition in transmission and distribution?
- Does WPD's modification proposal better achieve the relevant objectives?
Specifically:
 - Are the proposals more cost reflective than the current methodology?
 - Does WPD demonstrate that its proposals facilitate competition in generation and supply and do not restrict, distort or prevent competition in transmission and distribution?
- Have we correctly captured the main issues raised by WPD and SP's modification proposals in Annex 2?

Responses to this consultation letter

Views are invited on the issues raised on WPD and SP's charging modification proposals from interested parties, including IDNOs, DNOs, suppliers, customers and their representatives.

Views are invited by **Tuesday 19 June 2007**. Where possible responses should be sent electronically to Colette Schrier, email colette.schrier@ofgem.gov.uk.

The process associated with modifications to the charging methodologies is detailed within the distribution licence (SLC 4 and 4B). As the Authority's decision is time bound please ensure that your comments are received by the date indicated so that they can be fully considered. It may not be possible to consider responses that are received after this date.

All responses will be held electronically by Ofgem. They will normally be published on the Ofgem website unless they are clearly marked confidential. Consultees should put confidential material in appendices to their responses where possible. Ofgem prefers to receive responses electronically so that they can easily be placed on the website.

Copies of this document are available on the Ofgem website under the distribution charging modifications area of work⁷.

Please contact Colette Schrier on 0207 901 7239 or Alberto Prandini on 0207 901 7281 if you have any queries in relation to the issues raised in this letter.

Yours faithfully,



Martin Crouch
Director, Distribution

⁷ <http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgMods/Pages/DistChrgMods.aspx>

Annex 1 – summary of WPD and SP’s modification proposals

WPD proposal

1. Charges affected:

The proposal introduces two new IDNO-specific tariff with IDNOs defined as a separate group for charging purposes:

- Licensed distributor tariff – predominantly domestic LV connected
- Licensed distributor tariff – predominantly domestic HV connected.

The new tariffs are levied via a p/kWh day unit tariff and a p/kWh night unit tariff.

2. Customers affected:

These tariffs will apply to IDNOs when their connections are ‘predominantly domestic’. WPD also sets out that this method will apply (where appropriate) to license exempt operators supplying predominantly domestic loads.

3. Methodology:

WPD intends to introduce a new category customer group to charge IDNOs separately from other customers, noting that:

- the load shape of IDNOs supplying domestic customers differs from the existing load shape used to determine HV/LV non-domestic tariffs for the IDNOs; and
- the application by the DNO of a capacity charge may cause problems to IDNOs because the IDNO charges to domestic customers do not include a capacity charge element.

WPD’s calculation of these new tariffs is subject to a number of assumptions:

- No load research data is available to WPD so a proxy is used assuming a 50-house development at LV and a 300-house development at HV
- 10% of developments are assumed to be off peak in nature
- To qualify in this group more than 50% of a licenced distributor’s site maximum demand must be due to domestic customers
- At LV service costs are avoided and it is assumed that a proportion (50%) of the LV network cost is not attributable to the new IDNO tariffs.

4. Relevant objectives:

WPD states that the difference between the existing end user and the proposed IDNO tariffs reflects the costs that WPD expect to avoid (by not serving those customers) where customers are connected via an IDNO network.

WPD sets out that the proposal better meets the relevant objectives in that:

- IDNO networks have a different load shape to non-domestic networks. WPD states that it is not cost reflective to apply non-domestic charges to these networks
- Removing standing charges for predominantly domestic connections does not restrict competition in distribution.

5. Implementation:

If allowed, WPD's proposal will be implemented on the first day of the month four months after the Authority's decision not to veto.

SP proposal

1. Charges affected:

SP proposes to introduce three new yardsticks in respect of charges to IDNOs:

- IDNO site connected at HV
- Large (i.e. with capacity requirement equal to or higher than 100kVA) IDNO site connected at LV
- Small (i.e. with capacity requirement below 100kVA) IDNO site connected at LV.

2. Customers affected:

SP's proposals relate to charging arrangements for IDNO connections to the DNO network. Their proposal does not mention this applying to licence exempt distributors.

3. Methodology:

SP's calculation of these new tariffs is subject to a number of assumptions:

- IDNOs constitute a new and discrete category of customer type for determining customer-related and billing costs
- Domestic demand profiles are used over the three new yardsticks
- Capacity charges are retained for HV connections and LV connections greater than or equal to 100kVA
- Reactive power charges are not appropriate at this time for IDNO connections.

SP states that the difference between the existing and IDNO tariffs reflect the costs that SP expect to avoid (by not serving those customers) when customers are connected via an IDNO network. Specifically,

- For small LV sites the difference in costs will be via billing and service costs to end customers and savings on operating and maintaining the LV network
- In addition, for LV sites above 100kVA additional savings will accrue on operating and maintaining SP's network
- For HV sites savings are in terms of SP neither providing the LV network nor the HV/LV transformer plus savings on reinforcement assets not contributed towards fully by domestic customers
- No IDNO tariffs attract reactive power charges.

4. Relevant objectives:

SP states out that the proposed modification is justified in that:

- IDNO-specific yardsticks more accurately reflect the costs IDNOs impose on SP's network
- Not levying capacity charges below 100kVA aligns IDNOs with the fact that SP does not levy capacity charges on smaller customers without half hourly metering;
- At / above 100kVA capacity charges are deemed important by SP in order to incentivise parties to request the capacity they need

- Whilst SP's tariffs include reactive power charges for connections above 100kVA, charges for reactive power are not appropriate for IDNOs based on current evidence.

5. Implementation:

If allowed, SP's proposal will be implemented on the first day of the month four months after the Authority's decision not to veto.

Annex 2 - discussion of main issues

Specific yardsticks for IDNOs

Both modification proposals propose the introduction of dedicated yardsticks for IDNO connections at LV and HV. The yardstick (like the DNO's other HV and LV charges) is a geographical average rather than a locationally specific charge. No changes are proposed to DUoS charging for IDNO connections at EHV level.

WPD and SP's proposals argue that the yardstick for commercial customers that is currently applied to IDNOs does not reflect the demand profile of IDNOs' sites and hence does not reflect the associated UoS costs. For SP, the proposed IDNO yardsticks are derived from the profile used for domestic customers. For WPD, the proposed IDNO profile for predominantly domestic sites is estimated using their low voltage network design program.

SP's proposal is intended to include all IDNO connections at LV and HV level. WPD's proposal limits the application of IDNO yardsticks to 'predominantly domestic' connections, defined as sites where more than 50% of maximum demand is due to domestic users. IDNO sites of predominantly non-domestic nature will still be charged by WPD according to the commercial yardstick at the appropriate voltage level.

SP states that at present most IDNO connections represent purely or predominantly domestic sites. SP's tariffs are calculated using a domestic profile but could include commercial IDNO sites, which differs from WPD's approach. The extent to which individual customers or groups of customers are singled out as a separate group for charging purposes is an issue on which we welcome views.

Avoided costs

DNOs are required, under the Competition Act, to set tariffs in a way that, inter alia, avoids the emergence of 'margin squeeze'. Differences between charges to an IDNO and charges to the end-user served directly by the DNO must cover all of the costs avoided by the DNO including a reasonable margin on capital employed.

SP and WPD both argue that the proposed modifications are more cost-reflective than the current approach for charging IDNOs, and hence better achieve the licence objectives. They both state that the resulting charges aim to reflect the costs that the DNO avoids when customers are connected to the IDNO network.

The 'avoided cost' test is also important in terms of competition law. Both DNOs have provided some detail concerning the methods and principles used to take avoided costs into account when deriving DUoS charges resulting from IDNO yardsticks.

SP's modification makes clear that the concept of avoided costs also takes into consideration additional costs that the DNO bear because of the connection of an IDNO. Sources of additional costs are identified mainly in increased costs for manual billing arrangements and in different frequency of meter reading.

Broadly speaking, both proposals consider that IDNO connections entail differences in charges in terms of:

- Administration, billing and other customer-related costs
- Provision of network assets (not fully financed via connection charges) and related O&M costs
- Metering costs.

It is our understanding that such costs are scaled to each DNO's allowed revenue, although the modification proposals do not explicitly state this.

SP has a number of independent licensed distributor connections in its distribution areas. SP has considered various items of avoided cost in the model calculations for IDNO yardsticks. The resulting DUoS charges⁸ reflect the differences in costs identified by SP. Compared against domestic yardsticks, the IDNO yardsticks entail a substantially higher fixed charge (intended to reflect the additional costs relating to manual billing) and lower unit charges (intended to reflect the lower costs for the provision and O&M of LV network assets to the IDNO, i.e. costs net of any IDNO network provision). SP's proposed IDNO tariffs also include an element of capacity charges for large LV and HV connected IDNO sites and this is considered in more detail below.

WPD has only recently connected its first IDNO network and its proposal is reliant on a number of assumptions for estimating the 'last mile' savings derived from IDNO connections. Given that they impact on the level of IDNO tariffs, we would welcome views on the validity of WPD's assumptions⁹.

Tariff design and capacity charging

The IDNOs have generally argued that requirement for half-hourly metering and capacity charges represent two main factors that make IDNO connections unprofitable for small domestic developments.

WPD's proposal removes capacity charges at the boundary for LV and HV IDNO connections. As such, the IDNO can mirror the structure of the charges paid to the host DNO. WPD's comparison of upstream and all-the-way charges shows that the IDNO can obtain positive margins under all circumstances (in the range of 7% to 47% based on WPD's IDNO tariff setting assumptions).

SP's proposal retains capacity charges for 'large' LV¹⁰ and HV IDNO connections. SP argues that this is essential in order to give proper incentive to connecting parties to request the amount of capacity that is strictly needed for their load requirements. They argue that the resulting tariff structure faced by IDNOs replicates the structure of DNO charges to end customers.

In addition, SP is proposing a change to the use of system charging methodology to allow IDNO connections supplying domestic premises the options of applying for a capacity charge reduction where the demand peak is at night. The reduction would be calculated based on the difference between the day maximum demand and the night maximum demand.

As demonstrated in the graphs to SP's modification proposal report, the structure and ratio of SP's fixed to unit to capacity charges reduces the margin down to negative levels for the small LV yardstick when the IDNO site comprise less than around 10 domestic customers.

Annex 4 sets out an example of the differential between the UoS charges levied by the DNO and the 'all the way' cost charged by the IDNO to its end customers covering the DNO and IDNO networks. This analysis is sensitive to the assumptions made, and the assumptions of this example are set out in Annex 4.

Reactive power charging

SP notes their intention not to charge IDNOs for reactive power on the basis that the data available to it suggests that the vast majority of IDNO sites operate very close to a unity power factor. SP suggests that IDNOs can levy a charge on their customers for reactive power should they choose to. Domestic customers are not charged for reactive power in

⁸ As reported in the modification proposal for the purposes of SLC 4(A) statement.

⁹ Set out in WPD's modification proposal report published on our website at <http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgMods/Pages/DistChrgMods.aspx>.

¹⁰ At or over 100kVA. We understand that this would equate to a development of up to 100 houses.

terms of normal DNO tariffs. SP notes that this policy will be kept under review. WPD's proposal also excludes any reactive power charges under the two new tariffs. Views are sought on whether this treatment is appropriate.

Annex 3 - other issues

The following are current issues which do not form part of the modified SLC4 methodology statements proposed by SP and WPD but are intended to provide additional context.

Metering¹¹

Metering requirements do not feature in SP or WPD's proposed changes to their respective UoS charging methodology statements as part of this modification proposal. However, views are sought on WPD and SP's proposals with respect to metering as set out in their respective modification reports. WPD proposes to update the SLC4A use of system charges statement to state that aggregated data may be used at LV.

WPD's modification report sets out that WPD will require metering at the DNO-IDNO boundary (at the IDNO's expense) for connections at HV. For connections at LV IDNOs may provide aggregated profiled data (at site level) as an alternative to metering, for the purposes of meeting WPD's requirements for planning and operating the system.

SP's modification report notes that to monitor capacity, maximum demand meters are required at the DNO-IDNO boundary for all customers; the IDNO tariff proposals do not require half hourly metering. SP therefore suggests removing the need for HH metering in favour of maximum demand metering.

For small LV IDNO connections this metering will be for monitoring rather than for charging purposes. SP says that they would consider using settlement data for small LV connections in the future, as soon as workable changes to data flows are proposed. SP's report indicates potential for reading meters less frequently than half-hourly, and notes that this is cheaper than requiring frequent meter reads.

Capacity increases

The phasing of IDNO developments over time is another issue raised in SP's modification proposal report. Sometimes sites may not take their full capacity from the outset due to development over a period of time. Where capacity charges are levied, the treatment by DNOs of the phasing of such charges will have an impact on the level of the capacity charges paid. SP's modification proposal report suggests that phasing over time would be acceptable to SP with capacity charges (applicable to HV and its 'large LV' IDNO connections) calculated on the basis of requirements at each phase of development.

Connection asset adoption payments

Another DNO, United Utilities (UU), has indicated at recent industry meetings¹² its intention to put forward a proposal to the Authority to modify its SLC4B connection charging methodology statement. The proposal would relate to the introduction of adoption payments in respect of contestable assets adopted by UU following construction by an independent connections provider. If UU brings such a proposal forward, we would be likely to consult on it.

¹¹ The issue of metering has been debated in the industry, with DNOs initially arguing that IDNOs require metering at all boundary points. Ofgem has argued that the industry needs to develop proportionate solutions to this issue. Elexon is currently considering the use of aggregated settlement data for IDNO billing purposes, thereby potentially removing the requirement for boundary metering. They have come up with some initial options suggesting that it would be possible to do this. WPD's proposal sets out that they will accept aggregated profile data on for each connection point, i.e. a site by site basis.

¹² Industry structure of charges implementation steering group meeting on 13 March and distribution charging methodologies forum meeting on 3 May 2007.

Tariff changes

Another DNO, SSE, is proposing to amend the time period applied to changes in charges in its out of area networks. SSE proposes to introduce a 28-day notice period rather than the standard 40-day notice period set out in the DCUSA.

Annex 4 – illustrative examples of the impact of the proposals on IDNOs' gross margin

1. Development connected to DNO LV network with a capacity requirement below 100kVA

Illustrative assumptions

Number of households	45	
Average household consumption	3900	kWh
Average household capacity	2	kVA
Capacity diversity factor	1	
Diversified site capacity	90	kVA
Day units %	75%	
Night units %	25%	

Existing DNO tariffs (April 2007)

	All the way income IDNO collects ¹³	IDNO income per plot	Site boundary charge by DNO to IDNO ¹⁴	Site IDNO gross margin	IDNO margin per plot	% of total all the way charge
WPD South West	£3,686	£82	£2,362	£1,324	£29	36%
WPD South Wales	£3,808	£85	£3,155	£653	£15	17%
SP Distribution	£4,044	£90	£2,767	£1,277	£28	32%
SP Manweb	£3,243	£72	£1,914	£1,329	£30	41%

Modification proposals – capacity requirement below 100kVA

	All the way income IDNO collects	IDNO income per plot	Site boundary charge by DNO to IDNO ¹⁵	Site IDNO gross margin	IDNO margin per plot	% of total all the way charge
WPD South West	£3,686	£82	£3,098	£588	£13	16%
WPD South Wales	£3,808	£85	£3,234	£575	£13	15%
SP Distribution	£4,044	£90	£2,988	£1,057	£23	26%
SP Manweb	£3,243	£72	£2,410	£833	£19	26%

¹³ All the way income earned by IDNO based on mirroring (under BA1) DNO's domestic (profile class 1) tariff based on charges at April 2007

¹⁴ Existing site boundary illustrative charge based on LV NHH tariffs as follows:

- WPD South West: LLFC 540
- WPD South Wales: LLFC 300
- SP Distribution: tariff M01
- SP Manweb: tariff M06.

¹⁵ Based on SP (small LV) and WPD's (LV) modification proposal figures:

- WPD South West: 2.19p/kWh day units, 0.49p/kWh night units
- WPD South Wales: 2.34p/kWh day units, 0.35p/kWh night units
- SP Distribution: 46.79p/day fixed charge, 1.94p/kWh day units, 0.6p/kWh night units
- SP Manweb: 27.93p/day fixed charge, 1.63p/kWh day units, 0.37p/kWh night units

2. Development connected to DNO HV network

Illustrative assumptions

No. of households	150	
Average household consumption	3900	kWh
Average household capacity	2	kVA
Capacity diversity factor	1	
Diversified site capacity	300	kVA
Day units %	75%	
Night units %	25%	

Existing DNO tariffs (April 2007)

	All the way income IDNO collects ¹⁶	IDNO income per plot	Site boundary charge by DNO to IDNO ¹⁷	Site IDNO gross margin	IDNO gross margin per plot	% of total all the way charge
WPD South West	£12,285	£82	£6,340	£5,945	£40	48%
WPD South Wales	£12,695	£85	£6,472	£6,222	£41	49%
SP Distribution	£13,480	£90	£7,525	£5,956	£40	44%
SP Manweb	£10,810	£72	£7,105	£3,705	£25	34%

Modification proposals - HV

	All the way income IDNO collects	IDNO income per plot	Site boundary charge by DNO to IDNO ¹⁸	Site IDNO gross margin	IDNO gross margin per plot	% of total all the way charge
WPD South West	£12,285	£82	£6,084	£6,201	£41	50%
WPD South Wales	£12,695	£85	£6,216	£6,479	£43	51%
SP Distribution	£13,480	£90	£10,226	£3,255	£22	24%
SP Manweb	£10,810	£72	£8,500	£2,310	£15	21%

¹⁶ All the way income earned by IDNO based on mirroring (under BA1) DNO's domestic (profile class 1) tariff, based on charges at April 2007

¹⁷ Existing site boundary illustrative charge based on HV tariffs as follows:

- WPD South West: HH HV supplies tariff
- WPD South Wales: HH HV import tariff
- SP Distribution tariff: M04 HH HV tariff
- SP Manweb tariff: M029 Business HH HVN tariff

¹⁸ Based on SP and WPD's HV modification proposal figures:

- WPD South West: 1.29p/kWh day units, 0.29p/kWh night units
- WPD South Wales: 1.35p/kWh day units, 0.2p/kWh night units
- SP Distribution: 768.7p/day fixed charge, 1.24p/kWh day units, 0.38p/kWh night units, 1.3p/kVA/day capacity charge
- SP Manweb: 613.38p/day fixed charge, 1.05p/kWh day units, 0.24p/kWh night units, 1.19p/kVA/day capacity charge