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**MODIFICATION PROPOSAL**

**SSEPD/09/002**

**Modification proposal to amend Use of System Charging Methodologies  
for incorporation of the Common Distribution Charging Methodology  
(CDCM)**

**Date of Issue: 25 January 2010**

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

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## 1 Issue Authority

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Issue Date	Issue No	Modification details
Nov/Dec 09	-	Draft proposal and supporting information provided to Ofgem for assessment and comment.
16/12/2009	SSEPD/09/002 (Draft)	Draft proposal amended to reflect comments received from Ofgem and treatment of pre April 2005 generators.
25/01/2010	SSEPD/09/002	Issued to Ofgem

## 2 Introduction and background

- 2.1 This report sets out the proposed modification to the Southern Electric Power Distribution plc (SEPD) and Scottish Hydro Electric Power Distribution plc (SHEPD) use of system charging methodologies, as a result of the implementation of the Common Distribution Charging Methodology (CDCM) developed jointly by the DNOs and implemented under standard distribution Licence Condition 50.
- 2.2 SSE Power Distribution (SSEPD) is the trading name of Southern Electric Power Distribution plc (SEPD), Scottish Hydro Electric Power Distribution plc (SHEPD) and Scottish Hydro Electric Transmission Ltd (SHETL), part of the Power Systems division of Scottish and Southern Energy plc. SEPD and SHEPD are the licensed electricity distribution businesses, which own and operate networks in Central Southern England and North of Scotland respectively. SEPD and SHEPD also own and operate small embedded distribution systems outside of their distribution service areas.
- 2.3 Licence condition 50 requires SEPD and SHEPD to revoke its current methodology for LV and HV customers following the approval of the CDCM by the Authority. The changes detailed in this modification proposal show how SSEPD intend to implement this revocation following approval of the CDCM.
- 2.4 On 25 August 2009 the 14 distribution network licensees jointly submitted to the Authority the CDCM seeking its approval and introduction on 1 April 2010. The introduction of the CDCM means that all high voltage (HV) and low voltage (LV) connectees will have their distribution use of system charges calculated on a common methodology basis. Licence Condition 50 also requires the licensees to simultaneously revoke their current methodology for HV and LV connected network users.
- 2.5 For customers connected at Extra High Voltage (EHV) the DNOs will introduce new common charging arrangements on 1 April 2011. The proposal set out in this document therefore describes the interim charging methodology for these customers from 1 April 2010.

- 2.6 This modification proposal also addresses the removal of the blanket exemption of generator use of system charges to pre April 2005 EHV connected generators.
- 2.7 Currently site-specific charges in SEPD and standard published tariffs in SHEPD apply to EHV connections. A description of the SEPD and SHEPD current charging methodologies are detailed in the respective statements of charging methodology for use of system, available from the SSEPD website at:
- <http://www.ssepd.co.uk/Sections/TechnicalandProfessionalInformation/RelatedLinks/ElectricalCommercialPolicy.aspx>
- 2.8 In summary, SSEPD proposes to continue, the current arrangements for EHV demand and generation customers and to offer a portfolio approach for EHV connected embedded distribution networks.
- 2.9 Whilst there has not been time to consult on these proposals, SSEPD has kept its stakeholders informed at DCMF, teleconference meetings, by letter and via e-mails of the developments in distribution use of system charging for implementation from 1 April 2010.
- 2.10 If these proposals receive a non-veto decision from the Authority, they will apply from 1 April 2010.

### **3 Description of the Modification**

- 3.1 SSEPD proposes to modify its use of system charging methodologies to reflect changes that have taken place in the industry, licence condition numbering, line loss factor methodologies and contact details.

### **4 Proposed Charging Methodology**

- 4.1 SSEPD's proposals for distribution use of system tariffs for EHV customers, and for legacy HV customers in SEPD with site-specific charges, are described below. The charges are based on the 2010/11 Indicative use of system charges notified to Ofgem and Suppliers on 22<sup>nd</sup> December 2009.

**EHV and site-specific HV Demand**

- 4.2 For EHV and HV customers with site-specific charges, we propose to continue with the current methodology.
- 4.3 The current methodology is used to derive demand charges for all customer groups but standard HV and LV customer charges are then excluded (as these are covered by the CDCM). This process is necessary as there is interaction between all the customer groups primarily through scaling.

**Licensed Embedded Distribution Networks**

- 4.4 The EHV charges to LDNO's (including IDNO) licensed embedded distribution networks in the SEPD and SHEPD areas will be calculated using the same site specific basis as for EHV demand customers from 1 April 2010.
- 4.5 At present there are no EHV licensed embedded distribution networks in the SEPD and SHEPD areas and none are planned to be energised in 2010/11.

Allowed Revenue

- 4.6 The allowed revenue derived for demand from the DPCR 5 final proposals will be used to target the required allowed revenue for 2010/11.

**EHV Generation**

- 4.7 The proposed methodology for EHV Distributed Generation (DG) customers creates a pseudo generation "allowed revenue" based on the Distribution Generation Incentive included in DPCR4.
- 4.8 This approach mirrors the current charging arrangements but is adapted to apply to only EHV customers.
- 4.9 An asset annuity charge is calculated in aggregate by taking 80% of the reinforcement activities provided for connection, annuitised over 15 years at the cost of capital, defined in the DPCR4 price control period.
- 4.10 The DG incentive allowance rates designated in the DPCR5 Final Proposals will be applied to the relevant EHV capacity. These have been modelled as £2/kW (SHEPD) and £0/kW (SEPD), applied to generators connected between 1 April 2005 and 31<sup>st</sup>

March 2010, and £1/kW (SHEPD and SEPD) applied to those generators connecting after 31 March 2010. An operation and maintenance allowance of £1/kW per annum are applied to the Relevant DG capacity (kW). These DG Incentive values and the O&M allowance are inflated by the price adjuster index (PIAGt), and added to the aggregate asset annuity charge.

- 4.11 The resultant “allowed revenue” is recovered in monthly pence/kVA charges.
- 4.12 This approach requires no scaling.
- 4.13 We propose to apply this methodology in 2010/11.
- 4.14 Pre April 2005 generators were generally connected under a deep connection charging policy and so the connection costs faced by pre and post April 2005 generators may have been different. We believe that unbundling this matter, which is about addressing the legacy position, is not part of the methodology and will be dealt with separately. We have already started a process and intend to keep Ofgem informed on progress.
- 4.15 The pre April 2005 generators to date have been exempt from generator use of system charges (GDUoS). Ofgem have reiterated in their DPCR5 Initial Proposals, Final Proposals and in subsequent communications that the blanket exemption to charging these generators would expire on 31 March 2010. We have taken cognisance of SLC 19 by applying the standard published GDUoS charges to all generators and thereby not unduly discriminating between pre and post April 2005 generators. Also, under CDCM pre April 2005 HV and LV generators are charged GDUoS.
- 4.16 The current methodology will limit any year on year increase in GDUoS charges to 10% in real terms. This was introduced to prevent excessive volatility in post April 2005 generators charges when scaled to a small DG allowed revenue and in the interest of maintaining a stable path of GDUoS. SSEPD propose to remove this cap limit going forward to improve cost reflectivity.
- 4.17 Where an EHV generator also has an authorised EHV import capacity, use of system EHV demand charges will apply, as set out in this modification.

## **5 Impact of Proposals**

- 5.1 Appendix 1 shows the impact of the modification proposals for EHV demand and non CDCM HV in SEPD and SHEPD.
- 5.2 Appendix 2 shows the impact of the modification proposals to EHV generation in SEPD and SHEPD.

## **6 How the proposals better meet the licence obligations**

- 6.1 The proposal meets the requirements under Licence Condition 50 to allow the new CDCM to be implemented, as well as the requirements in Licence Condition 13 for the licensees to keep their charging methodologies under review.
- 6.2 We are bringing forward these proposals to amend our EHV charging methodologies for April 2010 to facilitate the introduction of the CDCM with the aim of minimising changes to EHV charges for 2010/11 prior to the introduction of a common EHV Distribution Charging Methodology (EDCM).
- 6.3 The proposed treatment of pre April 2005 generators meets our obligation under Licence condition 19 not to unduly discriminate between persons or classes of person. This better meets relevant objectives in SLC 13.3 (a) and (b) by ensuring that all generators are treated on the similar basis.
- 6.4 The proposal to remove the 10% cap on the change in GDUoS allows generator charges to be more cost reflective hence better meets relevant objective (c).
- 6.5 The changes to licence references and other “housekeeping” amendments improves clarity and thus better meets relevant objective (b)

## **7 Description of Revocations**

- 7.1 The proposed amendments in the methodology statements remove the current HV and LV demand and generation charging methodologies which are superseded by the implementation of the CDCM from 1 April 2010.

- 7.2 Following the Authority's approval of the CDCM it replaces the charging methodologies for HV and LV demand and generation charges. Consequently, this part of the methodologies for demand and generation reflect this accordingly.
- 7.3 The existing requirement for generators to be restricted in reducing their agreed export capacity for the first 5 years after connection has been amended to only refer to EHV generators as HV and LV generators are covered by the CDCM.
- 7.4 The current arrangements for the Network Access Rebate (now referred to as Network Unavailability Rebate Payments) have been retained in the statement for EHV generators and match those in the CDCM.

## **8 Proposed Use of System Charging Methodology Statements**

- 8.1 The proposals set out above would require changes to our Statements of Charges For Use of System of the SEPD and SHEPD Electricity Distribution Networks. The proposed modified versions of the Statements of Charging Methodologies for SEPD and SHEPD are provided as separate attachments to this modification proposal.
- 8.2 Consequential changes to the Overview and Use of System Charging statements will be the subject of separate modification proposal and will be submitted to the Authority for approval.

## **9 Implementation Date**

- 9.1 We propose to implement, subject to receiving the Authority's a non-veto, the proposed changes to the charging methodologies at the same time as the CDCM comes into force on 1 April 2010.

## Appendix 1 EHV Demand

### EHV Demand

Tables 1 and 2 shows the impact on SEPD and SHEPD EHV and non-CDCM HV demand customers from the application of the proposed methodologies on a 2010/11 indicative prices basis.

Table 1

SEPD – EHV / Legacy HV Demand Use of System charges - Indicative 2010/11			
Site	Existing (£m)	Proposed (£m)	% change
700	0.577	0.628	9%
701	0.473	0.516	9%
702	0.223	0.243	9%
703	0.313	0.341	9%
706	0.088	0.095	8%
708	0.212	0.231	9%
800	0.113	0.122	9%
801	0.135	0.147	9%
802	0.050	0.054	9%
803	0.012	0.013	9%
804	0.159	0.173	9%
805	0.028	0.030	9%
806	0.074	0.080	9%
807	0.033	0.036	9%
808	0.072	0.078	8%
809	0.037	0.040	8%
810	0.036	0.039	9%
811	0.158	0.172	9%
812	0.145	0.158	10%
813	0.340	0.371	9%
814	0.088	0.096	9%
815	0.241	0.263	9%
816	0.217	0.237	9%
817	0.175	0.190	9%
818	0.552	0.603	9%
819	0.036	0.039	9%
821	0.076	0.083	9%
822	0.341	0.371	9%
823	0.035	0.038	9%
824	0.275	0.299	9%

<b>SEPD – Site-specific EHV / HV Demand Use of System charges - Indicative 2010/11</b>			
Site	Existing (£m)	Proposed (£m)	% change
825	0.186	0.202	9%
826	0.104	0.113	9%
827	0.097	0.106	9%
828	0.389	0.424	9%
829	0.432	0.471	9%
830	0.449	0.491	9%
831	0.154	0.167	9%
832	0.244	0.267	9%
833	0.402	0.437	9%
835	0.292	0.317	9%
836	0.101	0.110	9%
839	0.036	0.040	9%
840	0.002	0.002	9%
841	0.004	0.004	10%
842	0.004	0.004	10%
844	0.002	0.002	10%
845	0.068	0.074	10%
846	0.006	0.006	11%
847	0.013	0.014	9%
849	0.220	0.240	9%
850	0.029	0.032	9%
851	0.355	0.386	9%
852	0.046	0.050	9%
853	0.053	0.058	9%
854	0.720	0.784	9%
855	0.043	0.047	9%
856	0.094	0.102	9%
857	0.053	0.057	8%
858	0.002	0.002	10%
859	0.012	0.014	9%
820	1.884	2.058	9%
837	0.342	0.374	9%
838	0.025	0.027	9%
901	0.105	0.115	10%

Table 2

<b>SHEPD – EHV Demand Use of System charges - Indicative 2010/11</b>			
Site	Existing (£m)	Proposed (£m)	% change
702	0.004	0.004	10%
703	0.017	0.019	10%
704	0.067	0.074	10%
705	0.098	0.108	10%
706	0.104	0.115	10%
707	0.034	0.037	10%
708	0.138	0.152	10%
709	0.087	0.096	10%
710	0.012	0.013	10%
711	0.238	0.262	10%
716	0.000	0.003	
717	0.000	0.003	
718	0.000	0.002	
719	0.000	0.003	
720	0.000	0.003	
721	0.000	0.003	
722	0.000	0.001	
723	0.000	0.002	
724	0.000	0.001	
725	0.000	0.003	
726	0.000	0.003	
727	0.000	0.001	
728	0.000	0.001	
729	0.000	0.002	
730	0.000	0.001	
731	0.000	0.001	
732	0.000	0.003	
733	0.000	0.003	
734	0.000	0.003	
735	0.000	0.003	
736	0.000	0.003	
737	0.000	0.001	
738	0.000	0.003	
739	0.000	0.003	
740	0.000	0.006	
741	0.000	0.003	
742	0.000	0.003	
743	0.000	0.001	

<b>SHEPD – EHV Demand Use of System charges - Indicative 2010/11</b>			
Site	Existing (£m)	Proposed (£m)	% change
744	0.000	0.008	
745	0.000	0.007	
746	0.000	0.007	
747	0.000	0.003	
748	0.000	0.003	
749	0.000	0.000	
753	0.000	0.003	
754	0.000	0.003	
755	0.000	0.001	
756	0.000	0.001	
757	0.000	0.002	
758	0.000	0.001	
759	0.000	0.003	
760	0.000	0.001	
761	0.000	0.002	
762	0.000	0.003	
763	0.000	0.003	
765	0.000	0.003	
766	0.000	0.003	
767	0.000	0.003	
768	0.000	0.003	
769	0.000	0.001	
770	0.000	0.003	
771	0.000	0.003	
772	0.000	0.003	
773	0.000	0.001	
774	0.000	0.001	
776	0.000	0.003	
777	0.000	0.002	
778	0.000	0.003	
779	0.000	0.003	
780	0.000	0.003	
781	0.000	0.003	
782	0.000	0.003	
783	0.000	0.003	
784	0.000	0.003	
785	0.000	0.003	
786	0.000	0.012	
(MSID) 8696	0.000	0.003	
(MSID) 8699	0.000	0.001	
(MSID) 8699	0.000	0.001	
(MSID) 8688	0.000	0.003	
(MSID) 8687	0.000	0.003	
(MSID) 8689	0.000	0.003	

## Appendix 2 EHV Distributed Generation

Table 3 below illustrates the assumptions determining the 2010/11 EHV Distributed Generation Use of System Charging methodology

Table 3

SSEPD Distributed Generation Incentive Assumptions	
Term	Includes
Relevant MW	Connections after 01-April 2010 (i.e. DPCR5 MW), plus: Connections between 01-April-2005 and 31-March-2010 (i.e. DPCR4 MW)
Incentive Rate (gir)	DPCR5 MW: SHEPD = £1,000/MW/yr for 15 years; SEPD = £1,000/MW/yr for 15 years; and DPCR4 MW: SHEPD = £2,000/MW/yr for remainder of 15 years; SEPD = capped at zero for remainder of 15 years
O&M Rate (gor)	DPCR5 MW: £1,000/MW/yr for both SHEPD & SEPD Areas DPCR4 MW: £1,000/MW/yr for both SHEPD & SEPD Areas
GDUoS Charges billed to	All EHV Sites connected/connecting before, on or after 1 <sup>st</sup> April 2005
PIAG <sub>2010-11</sub>	DPCR5: assume 2007/08 as Base Year; DPCR4 assume 2005/06 as Base Year
DG Capex Pass Through (GP term)	80% over 15 years (but, in this instance, modelled at zero)
Power Factor	Pf of 0.95 used to convert MW to MVA, and so derive p/kVA/month tariffs

Table 4A below shows indicative EHV GDUOS tariffs

Table 4

Indicative EHV Generation Use of System Charges			
	2009/10	2010/11	% Change
	p/kVA/mth	p/kVA/mth	
SHEPD	45	5.5	-88%
SEPD	45	0.7	-99%

Tables 4B and 4C Tables 1 and 2 shows the impact on SEPD and SHEPD EHV generation customers from the application of the proposed methodologies on a 2010/11 indicative prices basis. Note that those marked with \*\* are pre April 2005 connected generators who will be charged GDUoS for the first time.

Table 4B

<b>SEPD – EHV Generation Use of System charges - Indicative 2010/11</b>			
Site	Existing (£m)	Proposed (£m)	% change
915	0.000	0.005	**
916	0.000	0.012	**
918	0.000	0.000	**
936	0.000	0.001	**
914	0.000	0.001	**
917	0.000	0.001	**
919	0.000	0.004	**
920	0.000	0.004	**
921	0.000	0.001	**
922	0.000	0.000	**
923	0.270	0.004	-98%
925	0.038	0.001	-98%
927	0.000	0.001	**
927	0.000	0.001	**
927	0.000	0.001	**
928	0.000	0.001	**
929	0.000	0.001	**
930	0.000	0.000	**
938	0.000	0.001	**

Table 4C

<b>SHEPD – EHV Generation Use of System charges - Indicative 2010/11</b>			
Site	Existing (£m)	Proposed (£m)	% change
913	0.000	0.012	**
914	0.000	0.002	**
915	0.000	0.014	**
916	0.000	0.013	**
917	0.000	0.001	**
918	0.000	0.003	**
919	0.000	0.000	**
920	0.000	0.000	**
921	0.000	0.000	**
922	0.000	0.005	**
923	0.000	0.019	**
924	0.000	0.003	**
925	0.000	0.010	**
926	0.000	0.014	**
927	0.000	0.002	**
928	0.000	0.002	**
929	0.000	0.004	**
930	0.000	0.001	**
931	0.000	0.001	**
932	0.000	0.002	**
933	0.000	0.004	**
934	0.000	0.004	**
935	0.000	0.016	**
936	0.000	0.016	**
937	0.000	0.002	**
938	0.000	0.000	**
939	0.000	0.000	**
940	0.000	0.019	**
941	0.000	0.002	**
942	0.000	0.003	**
943	0.000	0.010	**

<b>SHEPD – EHV Generation Use of System charges - Indicative 2010/11</b>			
Site	Existing (£m)	Proposed (£m)	% change
944	0.016	0.002	-88%
945	0.000	0.005	**
946	0.000	0.005	**
947	0.000	0.000	**
948	0.000	0.008	**
949	0.000	0.007	**
953	0.029	0.003	-88%
954	0.000	0.003	**
955	0.000	0.001	**
956	0.000	0.001	**
957	0.000	0.000	**
958	0.000	0.001	**
959	0.000	0.005	**
961	0.000	0.001	**
962	0.000	0.017	**
963	0.014	0.002	-88%
965	0.000	0.002	**
966	0.000	0.002	**
967	0.000	0.002	**
968	0.000	0.001	**
969	0.000	0.004	**
970	0.000	0.001	**
971	0.000	0.000	**
972	0.000	0.002	**
973	0.000	0.006	**
974	0.000	0.005	**
975	0.000	0.046	**
976	0.000	0.000	**
977	0.018	0.002	-88%
978	0.000	0.005	**
979	0.000	0.003	**
980	0.000	0.001	**
981	0.000	0.001	**
982	0.000	0.001	**
983	0.000	0.003	**
984	0.000	0.003	**
985	0.000	0.012	**
986	0.000	0.008	**