

GENERIC CONSTRAINT MANAGEMENT TERMS

8. CONSTRAINT MANAGEMENT

8.1 Introduction and General

The **Generator** agrees to provide **The Company** with the **Commercial Ancillary Service of Constraint Management**, and this Clause 8 and Schedule J set out provisions relating to such service including the payments to be made by **The Company** to the **Generator** in respect thereof. For the purposes of this **Agreement**, the provisions of Schedule C (Charging Principles) shall have no application to this Clause 8 and Schedule J and the **Commercial Ancillary Service of Constraint Management**.

8.2 Definitions

8.2.1 In this Clause 8 and Schedule J the following terms shall have the meanings ascribed to them below:-

- “**Balancing Service**” has the meaning given in the **Transmission Licence**;
- “**Bid Availability Rate**” means the payment rate described as such forming part of the **Tendered Service Parameters** referred to in Sub-Clause 8.6.3(iv);
- “**Bid Index Margin**” means the margin described as such which, where the **Generator** submits an **Index Linked Tender**, forms part of the **Tendered Service Parameters** referred to in Sub-Clause 8.6.3(v)(b);
- “**Bid Reconciliation Payment**” has the meaning given in Sub-Clause 8.9.3;
- “**Capped Offer Price**” means the maximum **Offer Price** which may be submitted by the **Generator** pursuant to Sub-Clause 8.7.1(ii) in respect of any **Contracted BM Unit** at the **Power Station** and which is determined in accordance with Sub-Clause 8.7.2;
- “**Collared Bid Price**” means the minimum **Bid Price** which may be submitted by the **Generator** pursuant to Sub-Clause 8.7.1(ii) in respect of any **Contracted BM Unit** at the

	Power Station and which is determined in accordance with Sub-Clause 8.7.2;
“Constraint Management”	means an energy service provided by means of either the increase or decrease in Output from the Contracted BM Unit(s) at the Power Station following the issue of Bid-Offer Acceptance(s) during a Constraint Management Period ;
“Constraint Management Period”	means a period specified by The Company in accordance with Sub-Clause 8.6.2 in respect of which the Generator may tender to provide Constraint Management ;
“Constraint Management Requirement Notice”	has the meaning given in Sub-Clause 8.6.2;
“Constraint Management Settlement Period”	means a Settlement Period falling in a Constraint Management Period during which the Physical Notification of any Contracted BM Unit at the Power Station prevailing pursuant to the Grid Code BC 1 at Gate Closure in relation thereto specifies a profile of intended Output of equal to or greater than the Stable Export Limit for that Contracted BM Unit ;
“Contracted BM Unit”	means each of the BM Units specified in Schedule J, Section 1;
“EDL”	means the electronic despatch logging mechanism by which the parties communicate with each other in respect of the Contracted BM Units for the purposes of operation of the Balancing Mechanism and the utilisation of Balancing Services ;
“Fixed Capped Offer Price”	means the price described as such which, where the Generator submits a Fixed Tender , forms part of the Tendered Service Parameters referred to in Sub-Clause 8.6.3(v)(a);
“Fixed Collared Bid Price”	means the price described as such which, where the

	Generator submits a Fixed Tender , forms part of the Tendered Service Parameters referred to in Sub-Clause 8.6.3(v)(a);
“Fixed Tender”	means a tender submitted in accordance with Sub-Clause 8.6.3, in which the Generator specifies a Fixed Capped Offer Price and/or Fixed Collared Bid Price ;
“Fuel Efficiency Factor”	means, in respect of a Contracted BM Unit , the relevant fuel efficiency factor specified for that Contracted BM Unit in Schedule J, Section 1;
“Fuel Type”	means the type of fuel which the Generator intends to use at the Power Station during the Constraint Management Period , forming part of the Tendered Service Parameters referred to in Sub-Clause 8.6.3(iii);
“Index Linked Tender”	means a tender submitted in accordance with Sub-Clause 8.6.3, in which the Generator specifies an Offer Index Margin and/or Bid Index Margin ;
“Indicative Maximum Tendered MW”	means the maximum quantity of MW which the Generator (acting reasonably and in good faith) expects to make available from the Power Station for provision of Constraint Management ;
“Monthly Availability Payment”	has the meaning given in Sub-Clause 8.9.1;
“Offer Availability Rate”	means the payment rate described as such forming part of the Tendered Service Parameters referred to in Sub-Clause 8.6.3(iv);
“Offer Index Margin”	means the margin described as such which, where the Generator submits an Index Linked Tender , forms part of the Tendered Service Parameters referred to in Sub-Clause 8.6.3(v)(b);
“Offer Reconciliation Payment”	has the meaning given in Sub-Clause 8.9.2;

“Operational Day” means the period from 05.00 hours on one day to 05.00 hours on the following day;

“Tendered Service Parameters” means the data tendered by the **Generator** for a **Constraint Management Period** in the form set out in Schedule J, Section 4;

8.2.2 In this Clause 8 and Schedule J, unless the context otherwise requires, words and expressions defined in the **Balancing and Settlement Code** or the **Grid Code** and not otherwise defined in this **Agreement** shall have the meanings ascribed to them in the **Balancing and Settlement Code** or the **Grid Code** (as the case may be).

8.3 **Term**

The provisions of this Clause 8 shall come into effect at 00.00 hours on [*specify date*] and, unless this **Agreement** is terminated earlier in accordance with Clause 2, shall continue in force and effect until terminated by either **Party** giving to the other not less than two months’ written notice of termination, provided always that where a **Constraint Management Period** has already been accepted by **The Company** in accordance with Sub-Clause 8.6.5, such written notice may not be effective prior to the date of expiry of such **Constraint Management Period**.

8.4 **Introduction and General**

8.4.1 The **Generator** agrees, in respect of various periods during the term of this Clause 8, to make available and provide **Constraint Management** from one or more of the **Contracted BM Unit(s)** at the **Power Station** in accordance with the provisions of this Clause 8.

8.4.2 Subject to Sub-Clause 8.4.3, all communications between the **Parties** pursuant to this Clause 8 shall be given in accordance with **EDL** save as may be otherwise agreed by the **Parties**.

8.4.3 Any communications required to be given in writing by this Clause 8 shall be made and deemed to have been received in accordance with Clause [*Notices*][of the **MASA**] save as may be otherwise agreed by the **Parties**.

8.5 **Contracted BM Unit(s) and Fuel Efficiency Factor(s)**

For the purposes of delivery of **Constraint Management**, the **Parties** acknowledge that the **Contracted BM Unit(s)** and the **Fuel Efficiency Factor(s)** shall be those set out in Schedule J, Section 1.

8.6 **Tenders for provision of Constraint Management**

8.6.1 The **Generator** shall provide **Constraint Management** to **The Company** from one or more of the **Contracted BM Units** at the **Power Station** in respect of a **Constraint Management Period** where the **Generator's** tendered terms for provision of **Constraint Management** are accepted by **The Company** in accordance with this Sub-Clause 8.6.

8.6.2 **The Company** may publish on its web-site and provide written notification to the **Generator** of its requirement for **Constraint Management** (“the **Constraint Management Requirement Notice**”) for each of the **Operational Days** comprised in a period of one or more complete and consecutive **Operational Days** commencing no earlier than 00.00 hours on the day being [] **Business Days** after the date of publication of the **Constraint Management Requirement Notice** (“the **Constraint Management Period**”).

8.6.3 By the [] **Business Day** after the date of publication of the **Constraint Management Requirement Notice**, the **Generator** may, where the **Power Station** is not already the subject of a tender previously accepted by **The Company** pursuant to Sub-Clause 8.6.5 in respect of the **Constraint Management Period**, submit a single tender to **The Company** (using the pro forma set out in Schedule J, Section 4) specifying (in the form of **Tendered Service Parameters**) its terms for provision of **Constraint Management** from the **Power Station** in the **Constraint Management Period**. Each such tender shall specify the following **Tendered Service Parameters**:-

- (i) the **Constraint Management Period**;
- (ii) the tendered **Power Station**;
- (iii) the **Fuel Type**;
- (iv) the **Offer Availability Rate** and/or **Bid Availability Rate**; and
- (v) either:-
 - (a) where the **Generator** wishes to submit a **Fixed Tender**, a **Fixed Capped Offer Price** and/or a **Fixed Collared Bid Price**; or
 - (b) where the **Generator** wishes to submit an **Index Linked Tender**, the **Offer Index Margin** and/or **Bid Index Margin**.

Further, the **Generator** shall (for tender assessment purposes only) specify the **Indicative Maximum Tendered MW** in such tender.

8.6.4 Between the [] **Business Day** and the [] **Business Day** after the date of publication of the **Constraint Management Requirement Notice**, **The Company** may request that the **Generator** provide clarification with regard to any one or more of the items of information contained in any tender submitted pursuant to Sub-Clause 8.6.3, for the purposes of enabling **The Company** to assess the tender.

8.6.5 By the [] **Business Day** after the date of publication of the **Constraint Management Requirement Notice**, **The Company** shall notify the **Generator** in writing whether tendered terms for provision of **Constraint Management** from the **Power Station** in the

Constraint Management Period are accepted or rejected. **The Company's** decision shall be final and binding. Failing such notification in respect of the **Power Station**, **The Company** shall be deemed to have rejected the tendered terms for provision of **Constraint Management** from the **Power Station**.

8.6.6 Upon notification by **The Company** to the **Generator** of acceptance of tendered terms in respect of the **Power Station** in accordance with Sub-Clause 8.6.5, and for the duration of the **Constraint Management Period** the provisions of Sub-Clauses 8.7, 8.8, 8.9 and 8.10 (inclusive) shall apply in respect of the **Power Station**.

8.7 Provision of Constraint Management

8.7.1 Where **The Company** has, in accordance with Sub-Clause 8.6.5, accepted a tender for the provision by the **Generator** of **Constraint Management** from the **Power Station**, the **Generator** shall, in accordance with the **Balancing and Settlement Code** and the **Grid Code**, in respect of each **Constraint Management Settlement Period**, submit in respect of each **Contracted BM Unit Bid-Offer Data** comprising:-

- (i) **Bid-Offer Pair(s)** for:-
 - (a) the MW range from the MW level specified in the **Final Physical Notification Data** to (and including) the **Maximum Export Limit**; and/or
 - (b) the MW range from the MW level specified in the **Final Physical Notification Data** to (and including) the **Stable Export Limit**; and
- (ii) a **Bid Price** of not less than the relevant **Collared Bid Price** and/or an **Offer Price** of not more than the relevant **Capped Offer Price** in respect of those **Bid-Offer Pair(s)**, so as to permit either an increase and/or a decrease in the **Output** of the **Contracted BM Unit(s)** at the **Power Station** in accordance with the terms of the accepted tender.

8.7.2 For the purposes of Sub-Clause 8.7.1, the **Capped Offer Price** and/or **Collared Bid Price** shall be either:-

- (i) (where the relevant tender accepted in accordance with Sub-Clause 8.6.5 is a **Fixed Tender**) the **Fixed Capped Offer Price** and/or **Fixed Collared Bid Price** specified in such **Fixed Tender**; or
- (ii) (where the relevant tender accepted in accordance with Sub-Clause 8.6.5 is an **Index Linked Tender**) determined by reference to the formula contained in Schedule J, Section 2, Part I or II (as the case may be).

8.8 Instruction to provide Constraint Management

The Company may utilise **Constraint Management** made available by the **Generator** pursuant to Sub-Clause 8.7 by the issue of one or more **Bid-Offer Acceptance(s)** in respect of a **Contracted BM Unit** in accordance with the **Grid Code**.

8.9 Payments

8.9.1 Subject always to Sub-Clause 8.9.4, **The Company** shall, in accordance with Clause [payments] [of the MASA], pay an amount (“the **Monthly Availability Payment**”) calculated in accordance with the formulae set out in Schedule J, Section 2, Part III in respect of:-

- (i) each **Constraint Management Settlement Period** during the previous calendar month during which the **Generator** complied, at all times, with its obligations set out in Sub-Clause 8.7.1(i); and
- (ii) each **Contracted BM Unit** at the **Power Station** in respect of which:-
 - (a) the **Physical Notification** prevailing pursuant to **Grid Code BC 1** at **Gate Closure** specified a profile of intended **Output** of equal to or greater than the **Stable Export Limit**; and
 - (b) the **Stable Export Limit** was greater than zero MW.

8.9.2 Where, in respect of any **Constraint Management Settlement Period(s)**, **The Company** issues **Bid-Offer Acceptance(s)** in the circumstances where the **Generator** has failed to submit an **Offer Price** in accordance with the terms of Sub-Clause 8.7.1(ii) in respect of such **Constraint Management Settlement Period(s)**, then the **Generator** shall, in accordance with Clause [payments] [of the MASA], pay to **The Company** an amount (“the **Offer Reconciliation Payment**”) determined in accordance with the formula set out in Schedule J, Section 2, Part IV.

8.9.3 Where, in respect of any **Constraint Management Settlement Period(s)**, **The Company** issues **Bid-Offer Acceptance(s)** in the circumstances where the **Generator** has failed to submit a **Bid Price** in accordance with the terms of Sub-Clause 8.7.1(ii) in respect of such **Constraint Management Settlement Period(s)**, then the **Generator** shall, in accordance with Clause [payments] [of the MASA], pay to **The Company** an amount (“the **Bid Reconciliation Payment**”) determined in accordance with the formula set out in Schedule J, Section 2, Part V.

8.9.4 Notwithstanding and in accordance with the terms of Paragraphs 4.3.2.15 and 6.6.4 of the **Connection and Use of System Code**, the **Parties** agree that **The Company** shall be entitled to set off any sums payable by it to the **Generator** pursuant to Sub-Clause 8.9.1 against all or part of any sums payable by the **Generator** to **The Company** pursuant to Sub-Clauses 8.9.2 and 8.9.3.

8.10 Termination

Without prejudice to Sub-Clause 8.3, **The Company** may in its absolute discretion terminate the provision of **Constraint Management** from the **Power Station**, for the remainder of the **Constraint Management Period** in question, forthwith by notice in writing to the **Generator**, where the **Generator** persistently fails to comply with Sub-Clause 8.7.1(i) and/or 8.7.1(ii) and such failure amounts to an intentional or reckless breach or disregard by the **Generator** of its obligations under Sub-Clause 8.7.1(i) and/or 8.7.1(ii). For the avoidance of doubt, following termination of delivery of

Constraint Management from the **Power Station** in accordance with this Sub-Clause 8.10, no further payments shall accrue in respect of the **Power Station** pursuant to Sub-Clause 8.9.1 in respect of the remainder of the **Constraint Management Period** in question.

8.11 **Publication**

Notwithstanding the provisions of Clause [*Confidentiality and Announcements*] [of the **MASA**], **The Company** shall be permitted to publish and/or announce details of the information provided by the **Generator** in any tender for the provision of the **Commercial Ancillary Service of Constraint Management** from the **Power Station**, and the **Generator** consents to the disclosure by **The Company** of any such information in so far as it relates to the provision of **Constraint Management** from its **Contracted BM Units** pursuant to this Clause 8.

8.12 **Additional Costs**

The provisions of Clause [*Additional Costs*] [of the **MASA**] shall not apply to this Clause 8 and **Constraint Management**, and Clause [*Additional Costs*] [of the **MASA**] shall be read and construed accordingly.

SCHEDULE J
CONSTRAINT MANAGEMENT

SECTION 1 - DATA

Contracted BM Unit	Fuel Efficiency Factor (FE_i)

SECTION 2 - FORMULAE

Part I

Capped Offer Price

Where Sub-Clause 8.7.2(ii) applies, the **Capped Offer Price** (COP_{ij}) for each **Constraint Management Settlement Period** shall be calculated in accordance with the following formula (using notation as defined in Part VI of this Schedule J, Section 2):-

$$COP_{ij} = \left[\frac{FP_{ij} + CP_j}{FE_i} \right] + OC$$

Part II

Collared Bid Price

Where Sub-Clause 8.7.2(ii) applies, the **Collared Bid Price** (CBP_{ij}) for each **Constraint Management Settlement Period** shall be calculated in accordance with the following formula (using notation as defined in Part VI of this Schedule J, Section 2):-

$$CBP_{ij} = \left[\frac{FP_{ij} + CP_j}{FE_i} \right] - BC$$

Part III

Monthly Availability Payment

The payment to be made by **The Company** to the **Generator** referred to in Sub-Clause 8.9.1 in respect of the **Constraint Management Settlement Periods** in calendar month m (AP_m) when the **Generator** made **Constraint Management** available from the **Power Station** shall be calculated in accordance with the following formula (using notation as defined in Part VI of this Schedule J, Section 2):-

$$AP_m = \sum_{j \in m} OP_j + BP_j$$

Where:

$$OP_j = OAR \times OAV_j$$

$$BP_j = BAR \times BAV_j$$

And:

$$OAV_j = \sum_i \left[\max(MEL_{ij} - FPN_{ij}, 0) \right] \text{ where } FPN_{ij} \geq SEL_{ij}$$

$$BAV_j = \sum_i \left[\max(\min[MEL_{ij}, FPN_{ij}] - SEL_{ij}, 0) \right]$$

Part IV
Offer Reconciliation Payment

The **Offer Reconciliation Payment (ORP_j)** to be made by the **Generator** to **The Company** in accordance with Sub-Clause 8.9.2 in respect of any **Constraint Management Settlement Period** when the **Generator** failed to submit an **Offer Price** which complies with Sub-Clause 8.7.1(ii) shall be calculated in accordance with the following formula (using notation as defined in Part VI of this Annexure):-

$$ORP_j = \sum_{n,i} \left(QAO^{n,ij} \times \text{Max} \left[\left(PO^{n,ij} - ACO P_{ij} \right), 0 \right] \right)$$

Part V
Bid Reconciliation Payment

The **Bid Reconciliation Payment (BRP_j)** to be made by the **Generator** to **The Company** in accordance with Sub-Clause 8.9.3 in respect of any **Constraint Management Settlement Period** when the **Generator** failed to submit a **Bid Price** which complies with Sub-Clause 8.7.1(ii) shall be calculated in accordance with the following formula (using notation as defined in Part VI of this Annexure):-

$$BRP_j = \sum_{n,i} \left(QAB^{n,ij} \times \text{Min} \left[\left(PB^{n,ij} - ACBP_{ij} \right), 0 \right] \right)$$

Part VI
Notation

In Parts I to V inclusive of this Schedule J, Section 2:-

For gas plant insert:-

[FP_{ij} = the fuel price for **Constraint Management BM Unit i**, in **Constraint Management Settlement Period j**, which shall be determined as follows:-

$$FP_{ij} = \left(\frac{SAP}{29.3071} \right) \times 10$$

SAP = the System Average Price (p/therm) published by APX Gas Limited on the Enex system prevailing at **Gate Closure** in respect of **Constraint Management Settlement Period j**

For coal plant insert:-

[FP_{ij} = the fuel price for **Constraint Management BM Unit i**, in **Constraint Management Settlement Period j**, which shall be determined as follows:-

$$FP_{ij} = \left(\frac{cifARA}{6.67} \right) \times E (\$ \text{ to } \pounds)$$

cifARA = is the price of coal (US \$/tonne) inclusive of freight and insurance delivered to the large North West European ports (eg Amsterdam, Rotterdam or Antwerp) published on a weekly basis by Platts applicable during **Constraint Management Settlement Period j**

$E (\$ \text{ to } \pounds) =$ the daily US \$ to £ interbank exchange rate published on www.oanda.com/

For oil plant insert:-

$[FP_{ij}] =$ the fuel price for **Contracted BM Unit i** , in **Constraint Management Settlement Period j** , which shall be determined as follows:-

$$FP_{ij} = \left(\frac{ICEBrent}{1.70} \right) \times E (\$ \text{ to } \pounds)$$

$ICEBrent =$ is the price of oil (US \$/barrel) published daily by ICE on the BWAVE index applicable during **Constraint Management Settlement Period j**

$E (\$ \text{ to } \pounds) =$ daily US \$ to £ interbank exchange rate published on www.oanda.com/

$FE_{ij} =$ the **Fuel Efficiency Factor** for **Contracted BM Unit i** , in **Constraint Management Settlement Period j**

$$CP_j = EI_j \times EF \times E (\pounds \text{ to } \pounds)$$

where:

$EI_j =$ the daily EXC CFI futures Contract Emissions Index in **Constraint Management Settlement Period j** , as published on the European Climate Exchange website, www.europeanclimateexchange.com

$E(\pounds \text{ to } \pounds) =$ daily € to £ interbank exchange rate published on www.oanda.com

$EF =$ the emissions factor for the **Fuel Type** of **Contracted BM Unit i** , determined as follows:-

Gas: 0.19 tonne CO₂/MWh

Coal: 0.30 tonne CO₂/MWh

Heavy Fuel Oil: 0.26 tonne CO₂/MWh

Gasoil: 0.25 tonne CO₂/MWh

$OC =$ the **Offer Index Margin**

$BC =$ the **Bid Index Margin**

$\sum_{j \in m}$	=	is the summation over all Constraint Management Settlement Periods j , in calendar month m
OAR	=	Offer Availability Rate (£/MWh) applicable for the Constraint Management Period
BAR	=	Bid Availability Rate (£/MWh) applicable for the Constraint Management Period
$\sum_{n,i}$	=	is the summation over all Contracted BM Units i , and Bid-Offer Pair(s) n , at the Power Station
MEL_{ij}	=	is the integrated MWh of energy implied by integrating the Maximum Export Limit for Contracted BM Unit i , over Constraint Management Settlement Period j
FPN_{ij}	=	is the integrated MWh of energy implied by integrating the FPN (as defined in the Balancing and Settlement Code) for Contracted BM Unit i , over Constraint Management Settlement Period j
SEL_{ij}	=	is the integrated MWh of energy implied by integrating the Stable Export Limit for Contracted BM Unit i , over Constraint Management Settlement Period j
QAO^n_{ij}	=	has the meaning given in the Balancing and Settlement Code
PO^n_{ij}	=	has the meaning given in the Balancing and Settlement Code
$ACOP_{ij}$	=	the applicable Capped Offer Price determined in accordance with Sub-Clause 8.7.2
QAB^n_{ij}	=	has the meaning given in the Balancing and Settlement Code
PB^n_{ij}	=	has the meaning given in the Balancing and Settlement Code
$ACBP_{ij}$	=	the applicable Collared Bid Price determined in accordance with Sub-Clause 8.7.2

SECTION 3 - PRICES

NOT USED

SECTION 4 - NOTIFICATION FORMATS
CONSTRAINT MANAGEMENT TENDER

Constraint Management Period	
From (and including) - Operational Day/Month/Year	
To (and including) -Operational Day/Month/Year	

Tendered Service Parameters			
Tender Type (please tick one type only)	Fixed Tender	<input type="checkbox"/>	Index Linked Tender
Power Station/Site			
Fuel Type			
Availability Payment Rates:	Offer Availability Rate (£/MWh)		
	Bid Availability Rate (£/MWh)		

For Fixed Tender only:	Fixed Capped Offer Price (£/MWh)	
	Fixed Collared Bid Price (£/MWh)	
For Indexed Linked Tender only:	Bid Index Margin ("BC")	
	Offer Index Margin ("OC")	

For Tender assessment purposes:	
Indicative Maximum Tendered MW	

For National Grid Use Only	
Unique Constraint Management Tender Identification No:	
Date Received	
Received by	
Signature	