

Note to aid discussion of Balancing Services Standing Group, specifically under Terms of Reference item 9iii (See below)

9iii) System to Generator Operational Intertripping:

Consider the current arrangements for operational intertrips introduced by CAP076 (System to Generator Intertripping Schemes), in particular the ongoing applicability of payment structures. In addition, consider the applicability of any new tripping payment level or structure to the disconnection payment arrangements introduced by CAP048 (Firm Access and Temporary Physical Disconnection).

CAP48 – Firm Access and Temporary Physical Disconnection

CAP048 aimed to establish firm financial rights for generators to use NGC's transmission system by requiring NGC to pay compensation in the event that a generator is temporarily physically disconnected from the transmission system.

The compensation payable differs depending on whether the loss of transmission access is due to a planned or unplanned outage.

Planned Transmission Outage – A user is eligible for payment at the higher of:

- 1) £ per MW calculated by the total TNUoS income derived from generators divided by the total system Transmission Entry Capacity, divided by 365 to give a daily £ per MW rate; or
- 2) the actual £ per MW charge of a user by reference to the tariff in the Use of System Charging Statement divided by 365 to give a daily £ per MW rate

Unplanned Transmission Outage - For each Settlement Period of the Interruption which occurs within the first 24 hours, a sum equal to the price in £/MWh for the relevant Settlement Period(s) (as provided for in Section T 1.5.3 of the BSC). After the first 24 hours compensation is the same as a planned outage. Appendix 3 shows an example payment calculation for an unplanned outage.

A planned outage is defined as an outage co-ordinated by NGET under OC2 (see Appendix 2.). Outage co-ordination under OC2 covers various periods and notification can be made by National Grid at the day ahead stage (by 16:00). An unplanned transmission outage is not defined.

A user is eligible for a payment under CAP48 in the event that the transmission access loss is the result of a Relevant Interruption. A Relevant Interruption is defined in section 11 of the CUSC as an Interruption other than an Allowed Interruption (see Appendix 1).

The Allowed Interruption definition includes the standard exceptions (Force Majeure etc) as well as a catch-all Event (other than an Event on the National Electricity Transmission System). An Event is defined as an unscheduled or unplanned (although it may be anticipated) occurrence (see Appendix 2).

The CUSC specifies an Relevant Interruption would have to be solely due to an issue on the National Electricity Transmission System.

Appendix 1-2 details extracts from the CUSC and Grid Code relevant to the above, with Appendix 3 showing an example calculation for an unplanned interruption under CAP48.

Payments under CAP48

Each event resulting in the loss of transmission access is unique and on receipt of a claim a full investigation as to the cause(s) and issues involved would determine if payment under CAP48 would be applicable. The example scenario's set out in table 1 may not be complete or definitive of all situations where payment would or would not be made, the information is to aid the discussion of the working group only.

Table 1

Description	Payment Type
BMU out of service at time of interruption	Non
BMU out of service but due to return during outage	Payment for period unable to access
Interruption due to a combination of factors BMU/Transmission System	Non
Interruption of an initial BMU which then has/causes issues with other BMU's on site	Payment for initial BMU only
Interruption of BMU and restoration of access at later time, BMU delayed/unable to synchronisation due to internal issue	Payment for initial outage period only
Interruption caused by Force Majeure (eg lightning strike)	Non
Interruption notified 16:00 the day before the interruption	Payment at planned level

Appendix 1 - CUSC Extracts from Section 5 & Section 11

5.10 RELEVANT INTERRUPTIONS

5.10.1 In the event of a **Relevant Interruption** where the **Affected User** has not otherwise received compensation under the **Balancing and Settlement Code** **The Company** shall be liable to pay the **Affected User** upon request the **Interruption Payment** for the **Interruption Period**.

5.10.2 The **Interruption Payment** shall be paid by **The Company** to the **Affected User** within 28 days of the date of agreement as to the amount of the **Interruption Payment**.

5.10.3 The **Affected User** will take all reasonable steps to minimise the effect (and therefore the amount of the **Interruption Payment** sought as a consequence) of the **Relevant Interruption** on the operation of its business.

5.10.4 **The Company** shall as soon as reasonably practicable after the end of the **Interruption Period** notify the **Affected User** where the **Relevant Interruption** was in accordance with **Emergency Deenergisation Instruction**.

Definitions (CUSC Section 11)

Relevant Interruption - an **Interruption** other than an **Allowed Interruption**

"**Allowed Interruption**" shall mean an **Interruption** as a result of any of the following:

- a) an **Event** other than an **Event** on the **National Electricity Transmission System**;
- b) an event of **Force Majeure** pursuant to Paragraph 6.19 of the **CUSC**;
- c) a **Total Shutdown** or **Partial Shutdown**;
- d) action taken under the **Fuel Security Code**;
- e) **Disconnection** or **Deenergisation** by or at the request of **The Company** under Section 5 of the **CUSC**, except in the case of an **Emergency Deenergisation Instruction**;
- f) the result of a direction of the Authority or **Secretary of State**;
- g) tripping of the **User's Circuit Breaker(s)** following receipt of a signal from a **System to Generator Operational Intertripping Scheme** which has been armed in accordance with Paragraph 4.2A.2.1(b). or if provided for in a **Bilateral Agreement** with the affected **User**;

“Interruption” where either:-

solely as a result of **Deenergisation of Plant and Apparatus** forming part of the **National Electricity Transmission System**; or

(ii) in accordance with an **Emergency Deenergisation Instruction**;

a) a **BM Unit** comprised in the **User’s Equipment** of an **Affected User** (other than an **Interconnector Owner**) is **Deenergised**; or

b) an **Interconnector** of an **Affected User** who is an **Interconnector Owner** is **Deenergised**.; or

c) The **Maximum Export Limit** in respect of the **BM Unit(s)** associated with such **User’s Equipment** is zero.

Payments

“Interruption Payment” the payment for each day or part thereof of the **Interruption Period** calculated as follows:

1. In the case of a **Relevant Interruption** arising as a result of a **Planned Outage** the higher of:

A. the £ per MW calculated by reference to the total TNUoS income derived from generators divided by the total system **Transmission Entry Capacity**, in each case using figures for the **Financial Year** prior to that in which the **Relevant Interruption** occurs, this is then divided by 365 to give a daily £ per MW rate; or

B. the actual £ per MW of an **Affected User** by reference to the tariff in the **Use of System Charging Statement** for the **Financial Year** in which the **Relevant Interruption** occurs divided by 365 to give a daily £ per MW rate.

A or B are then multiplied by:

a) in the case of an **Affected User** other than an **Interconnected Owner** the MW arrived at after deducting from the **Transmission Entry Capacity** for the **Connection Site** the sum of the **Connection Entry Capacity** of the unaffected **BM Units** at the **Connection Site**;

And

b) in the case of an **Affected User** who is an **Interconnector Owner** the MW specified in the **Transmission Entry Capacity** for the **Connection Site**.

2. In the case of a **Relevant Interruption** arising as a result of an **Emergency Deenergisation Instruction**:

(a) sum equal to the price in £/MWh for the relevant **Settlement Period(s)** (as provided for in Section T 4.4.5 of the **Balancing and Settlement Code**) for each **Settlement Period** (or part thereof) from the time when the **Emergency Deenergisation Instruction** was issued by **The Company** until the first **Settlement Period** for which **Gate Closure** had not (at the time the **Emergency Deenergisation Instruction** was issued by **The Company**) occurred

multiplied by:

(i) in the case of an **Affected User** other than an **Interconnected Owner** the MW arrived at after deducting from the **Transmission Entry Capacity** for the **Connection Site** the sum of the **Connection Entry Capacity** of the unaffected **BM Units** at the **Connection Site**; and

(ii) in the case of an **Affected User** who is an **Interconnector Owner** the MW specified in the **Transmission Entry Capacity** for the **Connection Site**,

(b) For each subsequent **Settlement Period** of the **Relevant Interruption** which occurs within the first 24 hours of the **Relevant Interruption**, a sum equal to the price in £/MWh for the relevant **Settlement Period(s)** (as provided for in Section T 1.5.3 of the **Balancing and Settlement Code**)

multiplied by:

(i) in the case of an **Affected User** other than an **Interconnector Owner** the MW arrived at after deducting from the **Transmission Entry Capacity** for the **Connection Site** the sum of the **Connection Entry Capacity** of the unaffected **BM Units** at the **Connection site**; and

(ii) in the case of an **Affected User** who is an **Interconnector Owner** the MW specified in the **Transmission Entry Capacity** for the **Connection Site**; and

(c) and after the first 24 hours a sum calculated as 1 above

3. In the case of all other **Relevant Interruptions**:

For each **Settlement Period** of the **Relevant Interruption** which occurs within the first 24 hours of the **Relevant Interruption**, a sum equal to the price in £/MWh for the relevant **Settlement Period(s)** (as provided for in Section T 1.5.3 of the **Balancing and Settlement Code**).

Multiplied by:

a) in the case of an **Affected User** other than an **Interconnector Owner** the MW arrived at after deducting from the **Transmission Entry Capacity** for the **Connection Site** the sum of the **Connection Entry Capacity** of the unaffected **BM Units** at the **Connection Site**; and

b) in the case of an **Affected User** who is an **Interconnector Owner** the MW specified in the **Transmission Entry Capacity** for the **Connection Site**

and after the first 24 hours a sum calculated as 1 above.

Provided always that an **Affected User** shall not receive payment for more than one **Relevant Interruption** in any given day;

Appendix – 2 – Grid Code Definitions

Event - An unscheduled or unplanned (although it may be anticipated) occurrence on, or relating to, a **System** (including **Embedded Power Stations**) including, without limiting that general description, faults, incidents and breakdowns and adverse weather conditions being experienced.

Planned Outage - An outage of a **Large Power Station** or of part of the **National Electricity Transmission System**, or of part of a **User System**, co-ordinated by **NGET** under **OC2**.

**"Deenergisation" or
"Deenergise(d)"**

the movement of any isolator, breaker or switch or the removal of any fuse whereby no electricity can flow to or from the relevant **System** through the **User's Equipment**;

Maximum Export Limit (MEL) - A series of MW figures and associated times, making up a profile of the maximum level at which the **BM Unit** may be exporting (in MW) to the **National Electricity Transmission System** at the **Grid Entry Point** or **Grid Supply Point**, as appropriate.

Appendix 3

Calculation of 'Interruption Payment' under CUSC Paragraph 5.10

<http://www.elexon.co.uk/marketdata/PricingData/default.aspx>

First 24 Hours Payment

Date	Time	Period	MIP	Minutes	TEC of Site	Unaffected CEC	MW	Compensation	Notes
01-Sep-10	04:30:00	10	32.84	30	1050	100	950	15,599.00	Interruption 04:35:00
01-Sep-10	05:00:00	11	36.73	30	1050	100	950	17,446.75	
01-Sep-10	05:30:00	12	36.54	30	1050	100	950	17,356.50	
01-Sep-10	06:00:00	13	37.76	30	1050	100	950	17,936.00	
01-Sep-10	06:30:00	14	37.52	30	1050	100	950	17,822.00	
01-Sep-10	07:00:00	15	37.06	30	1050	100	950	17,603.50	Unit A access restored 07:29
01-Sep-10	07:30:00	16	38.92	30	1050	550	500	9,730.00	
01-Sep-10	08:00:00	17	40.86	30	1050	550	500	10,215.00	
01-Sep-10	08:30:00	18	40.19	30	1050	550	500	10,047.50	
01-Sep-10	09:00:00	19	42.65	30	1050	550	500	10,662.50	
01-Sep-10	09:30:00	20	41.78	30	1050	550	500	10,445.00	
01-Sep-10	10:00:00	21	42.07	30	1050	550	500	10,517.50	
01-Sep-10	10:30:00	22	41.62	30	1050	550	500	10,405.00	
01-Sep-10	11:00:00	23	42.34	30	1050	550	500	10,585.00	
01-Sep-10	11:30:00	24	42.48	30	1050	550	500	10,620.00	
01-Sep-10	12:00:00	25	42.73	30	1050	1050	0	0.00	Unit B access restored 11:45
Total								£196,991.25	

TEC of site	1050
CEC of Site	1100
Unit A	450
Unit B	500