CMP235 & CMP236: Information and Points to consider

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Analysis of Station Transformers

- What is the definition of a ‘station transformer’
  - Should banked station and unit transformers be included?
- Is it restricted to station transformers connected directly to National Grid busbars
- Limited to most of the Thermal and older Gas Stations
- Not all Generators appear to have a separate connection for demand
  - Therefore not affected by the Modification
- Having two station transformers does not necessarily mean extra security depending on the design of the substation. I.e. two Station Transformers on the same busbar
- Majority of stations have one BMU for demand. Wording in CUSC states affected BMU
- Not all stations are liable for Interruption payments due to design of connection

Station Transformers Data

- Therefore does it matter the number of Station Transformers a generator has
- Is it an all or nothing question?
- Table below shows forecasted Generation connected Generation (MW) 2015/16 with obvious Separate Station Transformers
- Definite bias towards older generation

2 Station Transformers	28684
Offshore	4730.5
Embedded	2166
3 Station Transformers	4057
4 Station Transformers	6574
TBC	16220.51
Unit Transformers	10132
	72564.01

Transmission Performance (Supply)

- National Electricity Transmission System Performance Report 2013 – 2014
- http://www2.nationalgrid.com/UK/Industry-information/Electricity-transmission-operational-data/Report-explorer/Performance-Reports/
- During 2013-14 there was no reportable Voltage Excursion within the National Electricity Transmission System. In 2011-12 there was 165 (London Incident)
- During 2013-14 there was no reportable Frequency Excursion within the National Electricity

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Transmission Network Reliability Incentive

- Provides NGC with direct financial incentives to meet network demands while minimising the extent and duration of interruptions to the supply of energy from its network.

- Energy unsupplied from the grid as a result of certain, narrowly-defined events (such as extreme weather, or events involving 3 customers or less) would be excluded from the incentive scheme.

The TNRI '3 or less customers' category *covers locations where major industrial customers are directly connected to the transmission system. The customer could be a steelworks, refinery or other large industrial processing site. Connection arrangements are chosen by the customer and often have a level of design and operational security below that normally required to satisfy the NETS SQSS. This may be reflected in a reduced cost of the connection. In some cases, customers have also chosen to secure their supplies using their own generation to compensate for this reduced level of transmission system security. Distribution Network Operators and domestic customers do not come within this category.*

Comparison to and Impact on Demand Customers

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- Directly Connected Demand do not receive payments for being Interrupted;
- Therefore is it discriminatory if Generation receives a payment for its demand being Interrupted?
- Is it a Consequential Loss?
- Doesn’t incentivise robust connections
- Under the current charging arrangements Demand customers will pay for all Interruption payments through an increased MAR
  - Generators have reached the 2.5€/Mwh limit so effectively any increase in revenues is paid for by demand customers

Relevant CUSC wording

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

"**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
(ii) a **Partial Shutdown**, but only for any period of **Interruption** which coincides with a **Market SuspensionPeriod**;
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 thecase 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**;