

## Stage 03: Modification Report

National Electricity Transmission System Security and Quality of Supply Standards (NETS SQSS)

# GSR015: Normal Infeed Loss Risk

What stage is this document at?

01	Work-Group Report
02	Industry Consultation
03	Modification Report

This Modification Report seeks to modify the NETS SQSS definitions of Normal Infeed Loss Risk, Infrequent Infeed Loss Risk and Unacceptable Frequency Conditions to address an inconsistency within them.

The purpose of this document is to assist the Authority in its decision of whether to implement the proposed modification to the NETS SQSS.

**Published on:** 13 August 2014



***The NETS SQSS Review Panel recommends:***

That GSR015 should be implemented as it better facilitates applicable NETS SQSS objectives.



***High Impact:***

System Operator.



***Medium Impact:***

None identified.



***Low Impact:***

Large Generators, Medium Generators, BM Participants, Generators undertaking OTSDUW, Interconnector Owners.

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### Any Questions?

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## About this Document

This Modification Report contains the information the NETS SQSS Review Panel believes is required for the Authority to progress a change to the National Electricity Transmission System Security and Quality of Supply Standards (NETS SQSS).

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## Document Control

Version	Date	Author	Change Reference
0.1	07 January 2014	National Grid	First Draft
0.2	29 January 2014	National Grid	Draft for Panel
1.0	10 March 2014	National Grid	Report to Authority
2.0	30 July 2014	National Grid	Draft for Panel Changes include the addition of proposed change to “Unacceptable Frequency Conditions” definition and new text in Section 3
3.0	13 August 2014	National Grid	Report to Authority

GSR015 Modification  
Report

13 August 2014

Version 3.0

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## 1 Executive Summary

- 1.1 The Normal and Infrequent Infeed Loss Risk definitions in the NETS SQSS were modified by GSR007<sup>1</sup>, increasing them to 1320MW and 1800MW respectively from 1st April 2014. The change was made because the increased operational costs of catering for larger losses were outweighed by the benefits of facilitating access to the transmission system.
- 1.2 The quantity assigned to Normal Infeed Loss Risk limits the active power infeed risk for certain conditions in the design of Offshore Generation Connections (NETS SQSS Chapter 7). Until 31st March 2014, the Normal Infeed Loss Risk is set to 1000MW. From April 1st 2014, it is set to 1320MW. The Normal Infeed Loss Risk definition also makes reference to frequency response by stating "*That level of loss of power infeed risk which is covered over long periods operationally by frequency response to avoid a deviation of system frequency by more than 0.5Hz.*"
- 1.3 The NETS SQSS Review Panel believes that the way the definition is drafted means it is inconsistent with the definition of Unacceptable Frequency Conditions and that it could be interpreted to place an obligation on NGET as the System Operator to ensure frequency does not fall below 49.5Hz for all power infeed loss risks above 1000MW from 1st April 2014 onwards. The NETS SQSS Review Panel believes that acting on this interpretation would incur unnecessary cost with no commensurate benefit as there will have been no significant change in the incidence of infeed losses above the limit of 1000MW by this date.
- 1.4 The NETS SQSS Review Panel therefore recommends that the NETS SQSS is modified to clarify that the definition of Normal Infeed Loss Risk serves to limit the maximum level of loss of active power infeed to be applied to certain aspects of the design and operation of the National Electricity Transmission System but does not dictate that additional frequency response is procured in the absence of any additional risk. The effect of this modification is that the frequency control policy applied to the Main Interconnected Transmission System (MITS) will remain unchanged.
- 1.5 The NETS SQSS Review Panel also recommends the definition of Infrequent Infeed Loss Risk is changed. This change has no material impact but maintains consistency between the Infeed Loss Risk definitions in the NETS SQSS.
- 1.6 The NETS SQSS Review Panel notes that the proposed changes to the Infeed Loss Risk definitions result in the loss of important detail concerning frequency limits and therefore recommends that this is included in the definition of Unacceptable Frequency Conditions.
- 1.7 The NETS SQSS Review Panel also recommends that frequency control performance is reviewed 12 months after the implementation of the change to confirm that frequency control performance has not deteriorated as a result of the change.
- 1.8 The NETS SQSS Review Panel wishes to highlight that the proposals described in this Modification Report do not seek to change the criteria applicable to the design of the networks. Furthermore, they do not change the size of Infrequent Loss Risk which was set at 1800MW from April 1st 2014.

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<sup>1</sup> GSR007 Reports are available here:

<http://www.nationalgrid.com/uk/Electricity/Codes/gbsqsscode/LiveAmendments/>

- 1.9 The NETS SQSS Review Panel also notes that it may be necessary to review the frequency control criteria in the NETS SQSS as European Codes are developed and proceed through Comitology. The NETS SQSS Review Panel believes that the introduction of the Load Frequency Control and Reserves Code will provide an opportunity to further develop frequency control criteria applied to the National Electricity Transmission System.

## 2 Why Change?

### Background

2.1 The Normal and Infrequent Infeed Loss Risk definitions in the NETS SQSS were last modified by GSR007, increasing their values to 1320MW and 1800MW respectively from 1st April 2014. The change was made because the increased operational costs of catering for 1800MW losses were outweighed by the benefits of facilitating access to the transmission system.

2.2 The Normal Infeed Loss Risk is defined as:

*"That level of loss of power infeed risk which is covered over long periods operationally by frequency response to avoid a deviation of system frequency by more than 0.5Hz. Until 31st March 2014, this is 1000MW. From April 1st 2014, this is 1320MW."*

2.3 The Infrequent Infeed Loss Risk is defined as:

*"That level of loss of power infeed risk which is covered over long periods operationally by frequency response to avoid a deviation of system frequency outside the range 49.5Hz to 50.5Hz for more than 60 seconds. Until 31st March 2014, this is 1320MW. From April 1st 2014, this is 1800MW."*

2.4 The Infrequent Infeed Loss Risk limit is considered in the design of Onshore Generation Connections (NETS SQSS Chapter 2). Both Infrequent and Normal Infeed Loss Risks are considered in the design of Offshore Generation Connections (NETS SQSS Chapter 7). This means that the definition of Normal Infeed Loss Risk affects the design of Offshore Transmission Systems but does not affect the design of Onshore Transmission Systems.

2.5 Chapter 5 (Onshore) and Chapter 9 (Offshore) stipulate that Unacceptable Frequency Conditions must not occur for a Secured Event. The list of secured events includes Infeed Loss Risks. Chapter 5 and Chapter 9 do not refer to Normal and Infrequent Loss Risks.

2.6 Unacceptable Frequency Conditions are defined in the NETS SQSS in the following way:

*"These are conditions where:*

*i) the steady state frequency falls outside the statutory limits of 49.5Hz to 50.5Hz; or*

*ii) a transient frequency deviation on the MITS persists outside the above statutory limits and does not recover to within 49.5Hz to 50.5Hz within 60 seconds.*

*Transient frequency deviations outside the limits of 49.5Hz and 50.5Hz shall only occur at intervals which ought to reasonably be considered as infrequent. It is not possible to be prescriptive with regard to the type of secured event which could lead to transient deviations since this will depend on the extant frequency response characteristics of the system which NGET shall adjust from time to time to meet the security and quality requirements of this Standard."*

## Issue

- 2.7 The NETS SQSS definition of Unacceptable Frequency Conditions stipulates how deviations outside the limits of 49.5Hz and 50.5Hz should be considered where it refers to a "transient frequency deviation". However, the definition of a Normal Infeed Loss Risk (Paragraph 2.2) could be interpreted to suggest that a limit of -0.5Hz should be applied for losses in this category and could therefore be seen to conflict with the definition of Unacceptable Frequency Conditions.
- 2.8 The impact of applying a limit of -0.5Hz to Infeed Loss Risks in the range of greater than 1000MW to 1320MW is that additional frequency response would be required, despite there being no change in infeed risks. This is because Infeed Loss Risks in the range of greater than 1000MW to 1320MW which already exist would be re-categorised.
- 2.9 The amount of frequency response which is required to meet frequency containment criteria depends on system conditions. NGET takes generation and demand characteristics into account when determining its frequency response requirements for a given secured event. Raising the lower frequency limit for infeed loss risks in the range of greater than 1000MW to 1320MW to 49.5Hz would have the effect of increasing Primary Response requirements significantly in periods of low demand. The cost of the additional frequency response is estimated at in excess of £100m per year.
- 2.10 Infeed losses of above 1000MW have been relatively infrequent. In the period between 1st May 1998 and 31st July 2012 there were 54 incidents where 1000MW or more was lost<sup>2</sup> (an average of less than 4 per year). Given this low historic rate of occurrence, the additional expenditure would yield very little benefit. If the rate of occurrence rises in the future, there may then be a case to increase frequency response requirements to maintain acceptable frequency control performance.
- 2.11 The NETS SQSS Review Panel believes that this additional expenditure was not an intended consequence of the GSR007 proposals and that the criteria set under the definition of Unacceptable Frequency Conditions should apply.

## Way Forward

- 2.12 It is therefore proposed that NETS SQSS drafting should be modified to clarify that Infeed Loss Risks should be managed in accordance with the definition of Unacceptable Frequency Conditions as intended.
- 2.13 It should also be noted that the frequency control requirements in the NETS SQSS are likely to need to be reviewed when the Load Frequency Control and Reserves European Code (LFCR)<sup>3</sup> comes into effect. The LFCR is in its final form prior to the European Commission giving it consideration. It is expected to come into force in 2014 with an implementation period of 18 months. At that time, it may be necessary to change the NETS SQSS to ensure it is not inconsistent with the LFCR. Interested parties will have an opportunity to contribute to any changes that are required. The "Frequency Quality Defining Parameters" specified in the current version of the LFCR are illustrated in Figure 1.

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<sup>2</sup> <http://www.nationalgrid.com/NR/rdonlyres/B256B837-1C17-4CE6-9955-EADC0B3ADA3/57610/November2012GCRPpapers3.zip> :

[EADC0B3ADA3/57610/November2012GCRPpapers3.zip](http://www.nationalgrid.com/NR/rdonlyres/B256B837-1C17-4CE6-9955-EADC0B3ADA3/57610/November2012GCRPpapers3.zip) :

"Annual Summary Report for Significant System Events (1 August 2011 to 31 July 2012)"

<sup>3</sup> <https://www.entsoe.eu/major-projects/network-code-development/load-frequency-control-reserves/>

	CE	GB	IRE	NE
Standard Frequency Range	±50 mHz	±200 mHz	±200 mHz	±100 mHz
Maximum Instantaneous Frequency Deviation	800 mHz	800 mHz	1000 mHz	1000 mHz
Maximum Steady-state Frequency Deviation	200 mHz	500 mHz	500 mHz	500 mHz
Time to Recover Frequency	not used	1 minute	1 minute	not used
Frequency Recovery Range	not used	±500 mHz	±500 mHz	not used
Time to Restore Frequency	15 minutes	10 minutes	20 minutes	15 minutes
Frequency Restoration Range	not used	±200 mHz	±200 mHz	±100 mHz
Alert State Trigger Time	5 minutes	10 minutes	10 minutes	5 minutes

Table 1 : Frequency Quality Defining Parameters of the Synchronous Areas

**Figure 1:** Extract from LFCR Drafting (Table 1)

### 3 Solution

- 3.1 It is proposed that the definitions of the Normal Infeed Loss Risk, Infrequent Infeed Loss Risk and Unacceptable Frequency Conditions in the NETS SQSS are modified to eliminate any potential confusion or inconsistency.
- 3.2 As described above, the Normal Infeed Loss Risk is currently defined as:
- "That level of loss of power infeed risk which is covered over long periods operationally by frequency response to avoid a deviation of system frequency by more than 0.5Hz. Until 31st March 2014, this is 1000MW. From April 1st 2014, this is 1320MW"*
- 3.3 There are a number of ways in which the definition of Normal Infeed Loss Risk could be modified to achieve the desired effect. However, care must be taken to ensure that undesired effects do not occur. One such undesired effect could be restricting the design of an Offshore Transmission System, which is not the intention of this proposal.
- 3.4 A straightforward way of avoiding confusion or inconsistency between the definition of Normal Infeed Loss Risk and the definition of Unacceptable Frequency Conditions is to remove the reference to frequency response in the Normal Infeed Loss Risk definition. The new definition would therefore become: *"Until 31st March 2014, this is a loss of power infeed risk of 1000MW. From April 1st 2014, this is a loss of power infeed risk of 1320MW"*. Any future necessary changes to frequency control requirements in the NETS SQSS (as a consequence of the LFCR for example) would be implemented by modifying the definition of Unacceptable Frequency Conditions.
- 3.5 Extension of this principle to the definition of Infrequent Infeed Loss Risk would mean its definition would change to: *"Until 31st March 2014, this is a loss of power infeed risk of 1320MW. From April 1st 2014, this is a loss of power infeed risk of 1800MW"*.
- 3.6 The NETS SQSS Review Panel agreed that the proposed changes should proceed to consultation for a period of 20 working days. The consultation opened on 11th November 2013 and closed on 6th December 2013. Following the consultation, the NETS SQSS Review Panel agreed that the proposals should be submitted to the Authority in the form of a Report to the Authority on 5th February 2014. The report was published on 10th March 2014. After reviewing the report, the Authority concluded that further consideration needed be given to the proposed change to retain the important detail on frequency limits which was being removed in the proposed change.
- 3.7 A revised proposal was discussed at the NETS SQSS Review Panel on 4th June 2014 recommending that additional text should be included in the definition of Unacceptable Frequency Conditions. The additional text would reinstate some of the detail previously contained within the Infeed Loss Risk definitions and still achieve the objective of the original proposal, which was to address inconsistency. The proposed legal text has been revised in line with comments received to ensure that references to frequency ranges are expressed consistently and to convert the criteria to a numbered list for ease of reference.
- 3.8 The full legal text required to implement the proposed solution for the Normal Infeed Loss Risk, Infrequent Infeed Loss Risk and Unacceptable Frequency Conditions definitions is provided in Annex 1.



## 4 Consultation

- 4.1 The GSR015 consultation was published on 11th November 2013. Responses were invited upon the proposals outlined in the consultation with a closing date of 6th December 2013.
- 4.2 Responses were invited to the following questions:
- (i) Do you agree that there is an inconsistency in the current definitions of Infeed Loss Risks and Unacceptable Frequency Conditions in the NETS SQSS?
  - (ii) Do you agree that the proposed change to the definitions of Normal Infeed Loss Risk and Infrequent Infeed Loss Risk removes any inconsistency?
  - (iii) Have you identified any material dis-benefits of the proposed change? Please explain what these are.
  - (iv) Do you support the proposed implementation approach of 10 business days following an Authority decision?
- 4.3 Responses were received from three parties: EdF Energy, Scottish and Southern Energy and from National Grid Electricity Transmission and are included in Annex 2 of this document. The responses supported the implementation of GSR015 but raised a number of points for further consideration.
- 4.4 One respondent highlighted that the impact assessment presented in the consultation document was valid but would only remain so provided infeed losses between 1000MW and 1320MW did not become more frequent. The NETS SQSS Review Panel agrees that this is the case. Frequency performance is reported under National Grid's licence condition C17 and any material change in infeed losses would be reported via this channel. The NETS SQSS Review Panel therefore believes it would be appropriate to review infeed loss statistics in the 12 month period following implementation of the proposed change and revisit the proposals if necessary.
- 4.5 Another response raised two points seeking further information and transparency.
- 4.6 The first of these was concerned with how the NETS SQSS term "Unacceptable Frequency Conditions" was applied in practice. The NETS SQSS Review Panel agrees that it may be appropriate to provide further clarity in this area and that implementation of the European Commissions' Load Frequency Control and Reserves (LFCR) Code is likely to require this. The NETS SQSS Review Panel believes the concern raised should be taken into account when the LFCR Code is implemented.
- 4.7 The second point was concerned with the costs to the industry of changing Infeed Loss Risks. The NETS SQSS Review Panel notes that previous changes to Infeed Loss Risk criteria have been subject to cost benefit analysis as is suggested should be the case here by the respondent. For the change proposed under GSR015, the NETS SQSS Review Panel did not believe a detailed cost benefit analysis was required as the change, if implemented, would ensure that costs remained unchanged. The NETS SQSS Review Panel agrees that it would be useful for the industry to have information on frequency control costs but notes that there are other forums which have the remit to review and develop frequency control requirements and costs.

### NETS SQSS Review Panel Assessment

- 5.1 National Grid's view is that the proposed changes should be implemented because they improve NETS SQSS drafting. They do this by removing an inconsistency in definitions. The inconsistency between the definition of Normal Infeed Loss and Unacceptable Frequency Conditions could be interpreted to mean that Primary Response requirements needed to increase from 1st April 2014. The additional frequency response would be procured to secure Infeed Loss Risks in the size range of greater than 1000MW to 1320MW to a higher containment frequency than at present, despite there being no material change in the frequency of occurrence of losses in this size range. The proposed change removes any potential ambiguity, ensures that frequency control performance is maintained within the current criteria and that Balancing Services costs are managed appropriately.
- 5.2 NETS SQSS Review Panel members agreed that the proposed changes should be submitted to the Authority in the form of this Report to the Authority on 6th August 2014.

### Impact on the NETS SQSS

- 5.3 GSR015 requires amendments to the following parts of the NETS SQSS:
- Terms and Definitions
- 5.4 The text required to give effect to the proposal is contained in Annex 1 of this consultation.

### Impact on National Electricity Transmission System (NETS)

- 5.5 The proposed changes will ensure that no additional Balancing Services costs are incurred due to the change in the value of the Normal Infeed Loss whilst ensuring that frequency control standards are maintained at their current level.

### Impact on NETS SQSS Users

- 5.6 The proposed modification will mean an increase in the volume of Balancing Services procured and the subsequent costs incurred will be avoided.

### Impact on Greenhouse Gas Emissions

- 5.7 The proposed modification will mean a marginal increase in Greenhouse Gas emissions will be avoided.

### Assessment Against NETS SQSS Objectives

- 5.8 The NETS SQSS Review Panel considers that the proposed changes would better facilitate the NETS SQSS objectives:
- facilitate the planning, development and maintenance of an efficient, coordinated and economical system of electricity transmission, and the operation of that system in an efficient, economic and coordinated manner;

*The change removes an inconsistency in NETS SQSS drafting which could be interpreted to mean that additional frequency response needs to be procured to secure Infeed Loss Risks in the size range of greater than 1000MW to 1320MW despite there being no material change in the frequency of losses in this size range occurring.*

- (ii) ensure an appropriate level of security and quality of supply and safe operation of the National Electricity Transmission System;

*The changes will maintain current frequency control criteria.*

- (iii) facilitate effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the distribution of electricity; and

*The proposal has a neutral impact on this objective.*

- (iv) facilitate electricity Transmission Licensees to comply with their obligations under EU law.

*The proposal has a neutral impact on this objective.*

### **Impact on Core Industry Documents**

5.9 The proposed modification does not impact on any core industry documents.

### **Impact on Other Industry Documents**

5.10 The proposed modification does not impact on any other industry documents.

### **Implementation**

5.11 The NETS SQSS Review Panel proposes GSR015 should be implemented 10 business days after an Authority decision.

## Annex 1 - Proposed Legal Text

This section contains the proposed legal text to give effect to the proposals. The proposed new text is in red and is based on NETS SQSS v2.2.

### Normal Infeed Loss Risk

~~That level of loss of power infeed risk which is covered over long periods operationally by frequency response to avoid a deviation of system frequency by more than 0.5Hz.~~ Until 31st March 2014, this is a *loss of power infeed risk* of 1000MW. From April 1st 2014, this is a *loss of power infeed risk* of 1320MW.

### Infrequent Infeed Loss Risk

~~That level of loss of power infeed risk which is covered over long periods operationally by frequency response to avoid a deviation of system frequency outside the range 49.5Hz to 50.5Hz for more than 60 seconds.~~ Until 31st March 2014, this is a *loss of power infeed risk* of 1320MW. From April 1st 2014, this is a *loss of power infeed risk* of 1800MW.

### Unacceptable Frequency Conditions

These are conditions where:

- i) the steady state frequency falls outside the statutory limits of 49.5Hz to 50.5Hz; or
- ii) a transient frequency deviation on the MITS persists outside the above statutory limits and does not recover to within 49.5Hz to 50.5Hz within 60 seconds.

Transient frequency deviations outside the limits of 49.5Hz and 50.5Hz shall only occur at intervals which ought reasonably be considered as infrequent.

*In order to avoid the occurrence of Unacceptable Frequency Conditions:*

- a) The minimum level of *loss of power infeed risk* which is covered over long periods operationally by frequency response to avoid frequency deviations below 49.5Hz or above 50.5Hz will be the actual *loss of power infeed risk* present at connections planned in accordance with the *normal infeed loss risk* criteria; and

b) The minimum level of *loss of power infeed* risk which is covered over long periods operationally by frequency response to avoid frequency deviations below 49.5Hz or above 50.5Hz for more than 60 seconds will be the actual *loss of power infeed* risk present at connections planned in accordance with the *infrequent infeed loss* risk criteria.

It is not possible to be prescriptive with regard to the type of secured event which could lead to transient deviations since this will depend on the extant frequency response characteristics of the system which NGET shall adjust from time to time to meet the security and quality requirements of this Standard.

## Annex 2 – Consultation Responses

<b>Respondent:</b>	Paul Mott
<b>Company Name:</b>	EDF Energy
<b>Do you support the proposed implementation approach of 10 business days following an Authority decision?</b>	Yes
<b>Do you believe that GSR015 better facilitates the appropriate NETS SQSS objectives?</b>	<p>Yes, we support GSR015, provided that loss events of between 1GW and 1.32GW do not become more frequent than the current average, which forms the basis of the consultation, of about 4 times per year. There is some risk in allowing frequency to fall to 49.2Hz, in that there is then an increased risk of loss of embedded generation – we saw this on the 27th May 2008. Frequency that day fell to 49.2Hz, which triggered a loss of 400MW of embedded generation. This embedded generation failure, caused frequency to fall further to (momentarily) as low as 48.792Hz. The low frequency relays on DNO transformers began to disconnect the first 10% of domestic demand at 48.8Hz; sufficient of these relays operated to disconnect 600MW of mostly domestic demand for around 20 minutes.</p> <p>We note that embedded generation connection standards for larger DG (G59/2) are potentially to be altered to increase resilience to fast-changing frequency and the standard had already been altered some time before 27/5/2008 to increase resilience to low frequencies. A learning point from 27/5/2008 was arguably that 100% compliance of existing operators in this sector with the standards as revised from time to time cannot necessarily be relied upon. There isn't yet a proposal to modify the G83/2 standard to increase resilience to fast-changing frequency for smaller DG.</p> <p>The proposed change to SQSS, GSR015, does remove potential ambiguity and ensures that frequency control performance is maintained within what are actually the current criteria. The new European LFCR Code as drafted, with an eye on SQSS objective (iv) (see LFCR Article 19, tables 1 to 3), allows for frequency to <b>rarely</b> fall to 49.2Hz, as long as this is not sustained. The passing of GSR015 would be consistent with the LFCR code, provided that loss events of between 1GW and 1.32GW do not become more frequent than the current average, which forms the basis of the consultation, of about 4 times per year. If the frequency of these events increases, we would want to see the SQSS rules altered, as more regular</p>

	<p>excursions, albeit short-term, to 49.2Hz, might begin to add too much cumulative risk to security of supply.</p> <p><i>For reference the applicable NETS SQSS objectives are:</i></p> <p><i>(i) facilitate the planning, development and maintenance of an efficient, coordinated and economical system of electricity transmission, and the operation of that system in an efficient, economic and coordinated manner;</i></p> <p><i>(ii) ensure an appropriate level of security and quality of supply and safe operation of the National Electricity Transmission System;</i></p> <p><i>(iii) facilitate effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the distribution of electricity; and</i></p> <p><i>(iv) facilitate electricity Transmission Licensees to comply with their obligations under EU law.</i></p>
<p><b>Do you agree that there is an inconsistency in the current definitions of Infeed Loss Risks and Unacceptable Frequency Conditions in the NETS SQSS?</b></p>	<p>Yes</p> <p>It is important that Grid continues to maintain frequency quality, and our support for GSR015 is on the basis that, as NG assumes, loss events of between 1GW and 1.32GW do not become more frequent than the current average of about 4 times per year – so that they remain rare. <i>If this is breached, GSR015 should be reviewed carefully, as it is unlikely to then remain appropriate.</i></p>
<p><b>Do you agree that the proposed change to the definitions of Normal Infeed Loss and Infrequent Infeed Loss Risk removes any inconsistency?</b></p>	<p>Yes</p>
<p><b>Have you identified any material negative consequences of the proposed change? Please explain what these are.</b></p>	<p>No</p>
<p><b>Do you have any additional comments?</b></p>	<p>No</p>

<b>Respondent:</b>	Campbell McDonald 01738 453424 campbell.mcdonald@sse.com
<b>Company Name:</b>	SSE Generation Ltd, Keadby Generation Ltd, Medway Power Ltd and Uskmouth Power Company
<b>Do you support the proposed implementation approach of 10 business days following an Authority decision?</b>	No, we propose that the change be implemented if approved by the Authority on April 1 <sup>st</sup> 2014.
<b>Do you believe that GSR015 better facilitates the appropriate NETS SQSS objectives?</b>	In isolation, yes, but the full impact and requirements of the change of Infeed Loss Risks need to be looked at in the whole, costed and transparent to the industry parties.
<b>Do you agree that there is an inconsistency in the current definitions of Infeed Loss Risks and Unacceptable Frequency Conditions in the NETS SQSS?</b>	Yes, we agree there is a possible interpretation of the Infeed Loss Risks which may conflict with the definition of Unacceptable Frequency Conditions.
<b>Do you agree that the proposed change to the definitions of Normal Infeed Loss and Infrequent Infeed Loss Risk removes any inconsistency?</b>	Yes we agree the proposed change removes the inconsistency.
<b>Have you identified any material negative consequences of the proposed change? Please explain what these are.</b>	National Grid have stated in several forums that the change of Infeed Loss Risks from 1st April 2014 will require future changes to primary frequency response from wind farms to 5 seconds. In addition it will require changes to RoCoF settings as loss of mains protection for embedded generators. All the consequences of the proposed change of Infeed Loss need to be captured and evaluated. All proposed changes should be fully considered in a full Cost Benefit Analysis carried out for the move to significantly larger Infeed Loss Risks. In particular for costs which are to be incurred by generators not benefiting from the increase to the Infeed Loss Risks. In the case of RoCoF setting changes for embedded generators the costs and additional plant risk will mainly fall on small independent generators.



<b>Do you have any additional comments?</b>	We support the desire to avoid increasing Balancing Services Costs unnecessarily; however they will have to rise at some point and transparency of the methodology to determine how the definition of Unacceptable Frequency Conditions is applied by National Grid is required. At what point will the Normal Infeed Loss Risk require additional frequency response provision and what criteria will be used to determine this. How will this be visible to the industry and be costed along with other initiatives proposed by National Grid to distribute the costs to generators.
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<b>Respondent:</b>	Mark Perry mark.perry@nationalgrid.com
<b>Company Name:</b>	National Grid Electricity Transmission
<b>Do you support the proposed implementation approach of 10 business days following an Authority decision?</b>	Yes – this change should ideally be implemented prior to 1st April 2014 or as soon as possible if this cannot be achieved.
<b>Do you believe that GSR015 better facilitates the appropriate NETS SQSS objectives?</b>	GSR015 will ensure that the changes brought in by GSR007 do not have the unintended consequence that additional response holding is required for existing arrangements, at greater cost to the consumer. The proposal will not affect system security or safe operation, and it will not remove the benefits of GSR007 in facilitating the connection of new generation.
<b>Do you agree that there is an inconsistency in the current definitions of Infeed Loss Risks and Unacceptable Frequency Conditions in the NETS SQSS?</b>	Yes, as described in the proposal, there is an inconsistency between the definitions that relate to planning and operating the system.
<b>Do you agree that the proposed change to the definitions of Normal Infeed Loss and Infrequent Infeed Loss Risk removes any inconsistency?</b>	Yes, the proposal will address the inconsistency.
<b>Have you identified any material negative consequences of the proposed change? Please explain what these are.</b>	No, I do not foresee any negative consequences.
<b>Do you have any additional comments?</b>	No