NATIONAL GRID NTS

Planned UK Link Downtime and compliance with the new European Network Codes

February 2015

ABOUT THIS DOCUMENT

This document comprises the decision by National Grid NTS ("National Grid") in respect of the compatibility of current Planned UK Link Downtime provisions with UNC changes proposed in respect of the Nominations and Re-nominations processes at Interconnection Points, to ensure Great Britain's compliance with the new European Network Codes.

If you require further details about any of the information contained within this document please contact Phil Lucas, (Transmission Network Service) on 01926 653546 or at phil.lucas@nationalgrid.com.

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BACKGROUND

The introduction of a number of new binding EU Regulations in the form of EU Network Codes (taking effect from late 2015 or early 2016) necessitates change to the Uniform Network Code (UNC) to reflect new arrangements regarding daily Nomination and Renominations at Interconnection Points (IPs).

Both existing and proposed regimes feature a specified period within which a User may submit Renominations which seek to revise prevailing Nomination or Renomination quantities.

Although under existing arrangements Users may submit Renominations between 15:00 on D-1 and 04:00 on the Gas Day, UNC provides for periods for 'Planned UK Link Downtime' when the UK Link system is unavailable to enable system maintenance to be undertaken.

Under the proposed new rules, Users may submit Renominations between 15:00 on D-1 and 02:00 on the Gas Day.

After discussing this issue at the EU Workgroup in September 2014, on 26th November 2014 National Grid issued a consultation which highlighted the interaction of the current and proposed Nominations rules with Planned UK Link Downtime provisions. The consultation was issued to solicit the views of other industry stakeholders on this issue and sought their views on a range of options for the frequency and duration of Planned UK Link Downtime and the compatibility of these options with the requirements of the new European Network Codes.

The options consulted on were as follows:

Option 1: no change
Option 2A: routine planned outage for 2 hours plus non-routine extended outages as required
Option 2B: non-routine outage as required
Option 3: full availability on a 24/7 basis

CONSULTATION RESPONSES

National Grid received three responses to its consultation from the following parties:

- **Centrica** (on behalf of the Centrica group of companies, excluding Centrica Storage Limited);
- **E.ON**; and
- **RWE** (on behalf of RWE Supply and Trading GmbH and RWE Generation UK plc).

The following is a summary of the responses each of the above organisations submitted in respect of the specific consultation questions.

1. *Do you agree with the pros and cons of each option? If not please explain.*

   Centrica did not submit a specific response to this question. Both **RWE** and **E.ON** agreed with the pros and cons outlined in the consultation however **RWE** was unclear as to why "Renomination process is reduced by daily outage" was indicated as a 'pro' in respect of Option 1.

   National Grid would observe that the full context of the 'pro' was "Consistent with existing GB regime - Renomination process is reduced by daily outage". To this extent the latter half of this sentence was merely included to describe the existing regime. Hence it is the maintenance of this existing regime that was the intended 'pro' of this option, not the 'reduction' of the availability of the Renomination process.

2. *Are there any additional costs or benefits associated with any of the options identified?*

   Centrica did not submit a specific response to this question and **E.ON** stated that it was not aware of any additional costs or benefits at this stage. **RWE** noted that the latter stages of each gas day is an active time for CCGTs responding to National Grid's power instructions and that any extension of UK Link system availability would align with this period.

3. *Do you believe that there are any other options that should be considered? If so, please provide details.*

   Centrica did not submit a specific response to this question. Both **E.ON** and **RWE** did not believe there were any other options that should be considered.

4. *Which option or options do you believe comply with the Interoperability Code requirement to minimise system downtime in the context of the Renominations process at IP points?*

   Centrica did not submit a specific response to this question and **E.ON** had no particular view on this point. **RWE** considered that all options can be interpreted to comply but expressed a view that the obligation to minimise downtime should be taken as an aspiration to do better than simply retaining the current daily outages.

5. *Which Option would you prefer to be implemented?*

This was the most important question in the consultation.

Centrica expressed support for Option 1 (no change) noting that the benefits of any reduction in downtime periods have to be balanced against potential uncertainties (about the availability of UK Link) and costs associated with the other options.

E.ON stated that ideally, it would prefer Option 3 but recognised that National Grid understood the necessity of a system downtime and as such its expressed support for Option 1. It noted that a high level of system reliability for the normal operating hours is more important to it than full system availability.

RWE expressed support for Option 2B. It noted that when deciding between 2A and 2B it would be of benefit to view an indication of how many outages National Grid actually envisaged it may need. It stated a belief that Option 3 costs are not justified.

National Grid has no indication of this at present as identification of such frequency necessitates analysis work at cost. In light of the decision expressed in this document we do not believe this work is necessary at this point. .

6. *If you support option 2A, 2B or 3 would you consider User Pays to be the appropriate funding mechanism?*

Centrica did not submit a specific response to this question. **E.ON** expressed agreement that User Pays was the appropriate funding mechanism for these options.

RWE understood that funding was available under the RIIO-T1 price control process for EU market facilitation and that this should be used. It stated that Gemini is a core User service and given that the options relate to availability of existing services rather than provision of additional services this should be centrally funded.

National Grid has been allocated some funding through the RIIO-T1 price control process for EU market facilitation. However, we believe that investment to deliver systems availability above and beyond that necessary for EU regulatory compliance is inconsistent with the purpose of this funding allocation.

National Grid would note that whilst the Agency Charging Statement does refer to the running and maintenance of a number of applications (including Gemini) as an 'IS Core' service, this is provided in the context of prevailing system downtime durations which have been determined as being necessary to enable such maintenance.

Based upon the evidence gathered by National Grid as referred to in this decision document, there is limited demand for an increased level of service in terms of system availability which would therefore suggested that the costs of such enhancements should be appropriately targeted to those parties. As expressed in our consultation (and supported by E.ON in its response) we believe that should one or more Users seek a greater level of UK Link system

availability to meet their commercial requirements, User Pays should be considered in respect of the funding of such change.

7. *Are there any other issues that you would like to highlight that have not been addressed within this Consultation document?*

Centrica did not submit a specific response to this question. **E.ON** noted that the Consultation was focused on the UK market, but flows across the Interconnection Points depend not just on the UK market but also on the state of adjacent markets.

RWE expressed a view that to realise the full benefit of its preferred option the On-the-day Commodity Market (OCM) must remain open as well so that shippers can manage their imbalance position.

National Grid acknowledges the views expressed by RWE on the availability of the OCM, however the scope of this consultation is limited to the operation of Planned UK Link Downtime.

NATIONAL GRID DECISION

National Grid would like to thank those organisations that took the time to participate in this consultation. In reaching a decision in respect of this issue we have carefully considered the responses given by these parties. In addition, as noted within the consultation document, this issue was highlighted at the September meeting of the UNC European Workgroup and we have also considered the feedback received at this industry forum.

Appendix 2 of this document contains an extract of the minutes of this meeting of the UNC European Workgroup and in summary, no definitive views on the options presented were expressed other than a suggestion to make no changes (i.e. Option 1) ahead of any evidence of behavioural changes as a consequence of the new arrangements at Interconnection Points.

In our consultation we stated that we were minded to support option 1 (retain the existing Planned UK Link Downtime), this view being based upon the feedback received from the September 2014 meeting of the UNC European Workgroup. In light of the majority of respondents to our subsequent consultation (two out of three responses) also supporting this option, **National Grid has decided to implement Option 1 (no change)** and therefore retain the existing Planned UK Link downtime provisions and the specific timeframes specified in the UK Link Manual, IS Service Definition Appendix 2.

As recognised by RWE, all options identified within the consultation can be interpreted as compliant with the requirements of the Interoperability and Data Exchange Rules Code (to keep downtime, as a consequence of planned IT maintenance, to a minimum) and National Grid concurs that the existing Planned UK Link downtime provisions are compliant.

APPENDIX 1: NOVEMBER 2014 CONSULTATION DOCUMENT

26th November 2014

Consultation on the compatibility of current planned UK Link downtime with UNC changes proposed in respect of the Nominations and Re-nominations processes at Interconnection Points, to ensure Great Britain's compliance with the new European Network Codes.

1 Introduction

This Consultation has been written by National Grid NTS, in its role as owner and operator of the Gas National Transmission System (NTS) in Great Britain. The purpose of this consultation is to seek industry views on the compatibility of current planned UK Link downtime with UNC changes proposed in respect of the Nominations and Re-nominations processes at Interconnection Points[1], to ensure Great Britain's compliance with the new European Network Codes. National Grid NTS has written the document after having initial discussions with Ofgem and members of the EU Work Group.

The UNC currently specifies that ahead of the gas flow day, a User of the NTS is required to provide notification to National Grid NTS of the quantity of gas it intends to flow into, or out of the NTS on a Gas Day via submission of a 'Nomination'. This notification may be revised within a defined timescale via submission of a 'Renomination'.

In order to facilitate compliance with the requirements of the EU Network Codes on Gas Balancing of Transmission Networks (the 'Balancing Code', BAL), Capacity Allocation Mechanism ('CAM Code') and Interoperability and Data Exchange Rules ('INT Code'), the Uniform Network Code (UNC) needs to provide for new arrangements regarding daily Nomination and Renominations at Interconnection Points (IPs).

The procedures for daily Nominations and Renominations at IPs described in the Balancing Code and other EU Codes differ from the prevailing GB arrangements, principally as a result of the need for interaction between adjacent Transmission System Operators at IPs to match Nomination quantities. This change has a consequential impact on timescales for processing User Nominations and Renominations at IPs by National Grid NTS as the Transporter, which will be managed within the UK Link system.

This Consultation letter highlights the interaction of the current and proposed Nominations rules with planned UK Link downtime provisions and seeks stakeholders' views on a range of options for the frequency and duration of UK Link downtime and the compatibility of these options with the requirements of the new European Network Codes.

This issue was discussed at the September 2014 meeting of the European Workgroup run by the Joint Office of Gas Transporters and agreement in principle was reached with attendees on an approach which does not change current UK Link downtimes. However, as not all affected stakeholders were involved in these meetings, we are issuing this Consultation in order to gauge the views of all parties likely to be impacted by this issue.

[1] National Grid NTS has developed the new Nominations and Renominations arrangements with our adjacent Transmission Network Operators (TSOs).

The Consultation also sets out the proposed timescales for how this issue will be progressed, whilst considering wider industry initiatives and dependencies of demand forecasting, and systems change congestion for October 2015. The document is structured into four sections. Section Two describes the current and proposed future process for making Nominations and Renominations at IPs in the context of the UK Link downtime window and obligations within the European Network Codes. Section Three sets out a number of options, with their associated pros and cons. Section Four includes a number of questions in relation to the options and the final section, Section Five, shows the proposed next steps to be undertaken by National Grid NTS.

Please email your responses to Phil.Lucas@nationalgrid.com by 24th December 2014.

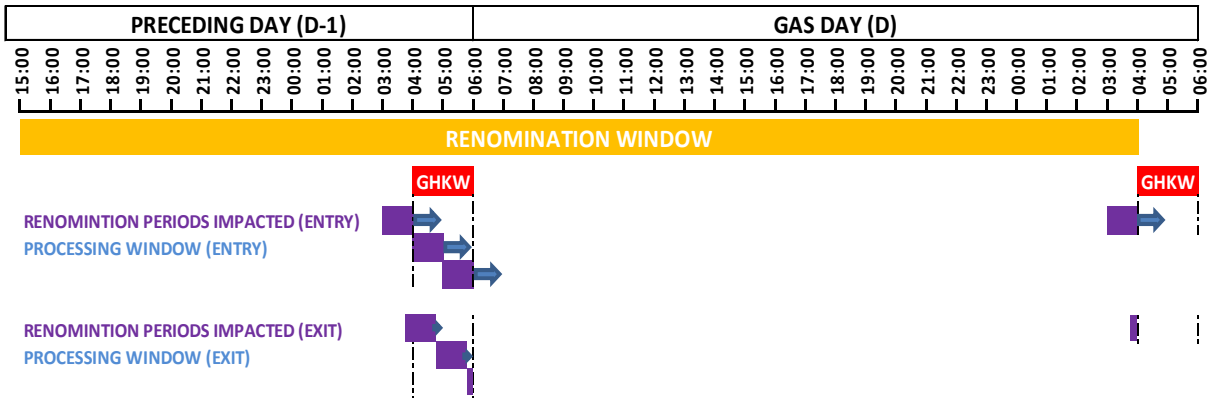
2 Background

2.1 Current Renomination Process[2]

Renominations can be submitted in respect of a Gas Day (kWh/d) at each NTS Exit Point (specifically Connected System Exit Point) and at each System Entry Point comprised in an Aggregate System Entry Point at an IP. The minimum notice period for a Renomination to become effective is not less than 60 minutes for Entry and not less than 15 minutes for Exit.

UNC Transportation Principal Document (TPD) Section C details the rules for submission and processing of Renominations including the period in which such transactions are able to be submitted. This period is currently between 15:00 hours on the day prior to the Gas Day (D-1) and 04:00 on the Gas Day (D).

The following diagram illustrates the current period for submission of a Renomination and the periods impacted by the planned UK Link downtime (see section 2.1.1 for details). Appendix A provides details of how the current UK Link downtime window operates, which is used to make periodic updates to the UK Link suite of systems, including Gemini, which is often referred to as the "Gemini Housekeeping Window" (GHKW).



2.1.1 UK Link Downtime – Current Nomination Process

Although Users may submit Renominations between 15:00 on D-1 and 02:00 on the Gas Day, UNC TPD Section U 1.11.1 as detailed below provides for periods for when the UK Link system is unavailable to enable system maintenance to be undertaken:

[2] For the avoidance of doubt, this process applies to all Entry and Exit points on the NTS

- *"To enable the Transporters to operate and maintain UK Link, on each Day and/or particular Days UK Link, or (where so specified in the UK Link Manual) particular parts of UK Link, will not be operational at certain times and for certain periods ("planned UK Link downtime") specified in or determined in accordance with the UK Link Manual."*

The UK Link Manual, IS Service Definition Appendix 2 specifies the actual periods of "planned UK Link downtime", for the whole of UK Link as follows:

- *"every Monday to Saturday, 1 hour between 0415 and 0545hrs and every Sunday 0400 to 0600hrs"*.

The Renomination time periods impacted by the current planned UK Link downtime are shown in the following table:

Day	**Entry/Exit Point**	**Times**
Monday to Saturday	Entry	03:01-05:15 (D-1) 03:01-04:00 (D)
	Exit	03:46-05:15 (D-1) 03:46-04:00 (D)
Sunday	Entry	03:01-06:00 (D-1) 03:01-04:00 (D)
	Exit	03:46-06:00 (D-1) 03:46-04:00 (D)

Therefore, the Renominations period remains largely unaffected by planned UK Link downtime across a full week period for Entry Renominations and for Exit Renominations.

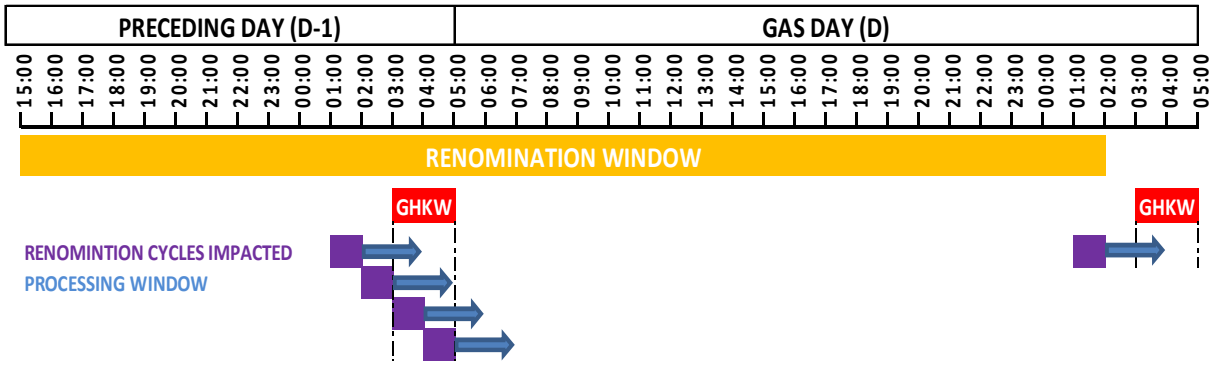
2.2 Proposed Renominations Process at IPs (as advocated by UNC Modification Proposal 0493)

To implement the requirements in respect of the new Nomination arrangements at IPs, National Grid NTS raised UNC Modification 0493 in April 2014.

Consistent with the current approach described in section 2.1, Modification 0493 seeks to maintain the principle of the specification of a period for Renominations which is then subject to the prevailing terms relating to planned UK Link downtime.

Users may submit Renominations between 15:00 on D-1 and 02:00 on the Gas Day. National Grid NTS will process Renominations from the commencement of the hour following submission, the hour bar (HB). The minimum notice period for a Renomination to become effective is 120 minutes.

The following diagram illustrates the proposed period for submission of a Renomination and the periods impacted by the planned UK Link downtime.



The diagram reflects the implementation of UNC Modification 0461 from 1st October 2015 whereby the Gas Day changes from 0600/0600hrs to 0500/0500hrs. One further aspect of Modification 0461 is the movement of planned UK Link downtime from 0400hrs/0600hrs to 0300hrs/0500hrs on a Sunday and from 04:15hrs/05:15hrs to 03:15hrs/04:15hrs Monday to Saturday.

2.2.1 UK Link Downtime – New Nomination Process at IPs

The Renomination time periods potentially impacted by the current planned UK Link downtime is shown in the following table:

Day	Times
Monday to Saturday	01:00-04:15 (D-1) 01:00-02:00 (D)
Sunday	01:00-05:00 (D-1) 01:00-02:00 (D)

In this case, the Renomination period that remains unaffected by planned UK Link downtime across a full week period for all Renominations at IPs is slightly reduced for IPs. However, for other GB entry and exit points the performance levels remain unchanged.

In both the current Renomination process and the new Renomination process at IPs the principle impact of planned UK Link downtime is on the Renominations period on the Preceding Day (D-1), however at this point there remains considerable opportunity for a User to address its commercial balancing position prior to the deadline for Renominations towards the end of the following Gas Day.

Whilst there remains an impact on the availability of systems (and therefore ability to process Renominations) towards the end of the Renominations window on the Gas Day itself (D), i.e. between 02:00(D) and 04:00(D) the impacts are arguably minimal for the following reasons:

- system unavailability is outside core business hours;
- the final NDM forecast (which may impact a User's commercial Balancing position) is provided at midnight which affords the opportunity for a User to submit a Renomination, and for this to be processed, prior to planned UK Link downtime.

2.2.2 Interoperability Code

The EU Interoperability and Data Exchange Rules Network Code, which was approved by the EU Commission on 4th November sets out the principles for the data exchange activities within the Nominations process and implementation is required by May 2016. Article 22 'Data exchange system security and availability', of this Code, provides that:

"Each transmission system operator shall be responsible for ensuring the availability of its own system and shall keep the downtime, as a consequence of planned IT maintenance, to a minimum and shall inform its counterparties in a timely manner, prior to the planned unavailability".

Therefore, the Interoperability Code recognises that a Transmission System Operator may require periods of system outage to undertake maintenance of its systems. Whilst the Code requires such periods be kept to a "minimum", it does not further define minimum, so this requirement is open to interpretation.

Principally, this Consultation document seeks the views of stakeholders in respect of defining the level of system unavailability which meets the Interoperability Code requirements for the minimisation of downtime, specifically in the context of Renominations at IPs. The Consultation identifies a range of options for downtime duration, one or more of which stakeholders may view as consistent with Interoperability Code requirements.

3 Options

National Grid NTS has identified a range of options for the prospective management of planned UK Link downtime. The options were discussed with the industry at the UNC European Workgroup in September 2014. These Options (with associated pros, cons and estimated costs) are set out below and range from retention of the existing downtime (no change) to development of 24/7 system availability.

Whichever option is favoured and if this requires change, this will need to be carefully considered against existing funding arrangements for National Grid NTS as the System Operator and the Xoserve User Pays model.

For any option requiring a change to existing arrangements it is important to note that National Grid NTS will not be in a position to deliver this by October 2015 because of the following reasons:

- new infrastructure would need to be designed, procured and built
- new phases of testing would need to be introduced into the plan (e.g. operational performance, penetration testing), which would compress the time available for User Acceptance Testing (UAT) of EU functional changes
- additional regression testing is required for non-EU functionality
- The project delivery would introduce a very significant risk of slipping the EU Phase 2 release beyond winter 2015.

These issues have been validated in discussions with Xoserve, which has highlighted that to deliver increased system availability (via option 2a, 2b or 3) would require a project of at least 9 – 12 months duration costing an estimated £1m - £2m+, in an already congested implementation window.

Having considered the systems impacts and associated delivery timescales, the most likely timescale to deliver options 2a, 2b or 3 will be from May 2016 at the earliest, when the Interoperability Code becomes effective. Therefore, the existing planned UK Link downtime will be in place until at least this point.

The rest of this section sets out the details of each option, with the associated pros, cons and estimated costs. The estimated cost ranges have been produced based on high level analysis which would need to be re-evaluated once a clear requirement is established by the industry.

3.1 Option 1: Do Nothing – Retain the Existing daily UK Link downtime

Option 1 is to 'Do Nothing' and maintains the existing UK Link downtime window (with a 1 hour outage on a Monday to Saturday, 2 hours on a Sunday). It retains the existing arrangements within UNC for scheduling additional extended maintenance outages.

Option	Description	Pros	Cons	Estimated Costs
1	Do Nothing – Retain Existing daily UK Link downtime, including specific system relevant outages	• No additional cost • Consistent with existing GB regime - Renomination process is reduced by daily outage • INT Code recognises outages	• Renomination Process at IP's availability reduced by daily outage • Whether a daily outage keeps downtime "to a minimum" is open to interpretation	£0

The feedback received by National Grid NTS at the European Workgroup was that the existing planned UK Link downtime (option 1) was likely to be compliant with the EU Interoperability Code requirement for the minimisation of system downtime. **As a consequence, National Grid NTS is minded to support option 1 – Do Nothing.** However, National Grid NTS recognises that other stakeholders not present at the European Workgroup may have other views.

3.2 Option 2A routine planned outage for 2 hours plus non-routine extended outages as required for Gemini

This option would remove the daily downtime window, but retain the ability to schedule routine maintenance outages as required plus non-routine extended outages as required. Note that the exact timing of the routine outage needs to be determined but it would be less frequent than daily (weekly, monthly, bi-monthly, etc).

Option	Description	Pros	Cons	Estimated Costs
2A	A routine planned outage for 2 hours plus non-routine extended outages as required (exact timings to be determined)	• Renomination Process availability increased (relative to option 1) • Less frequent non routine outages (relative to option 2b) • INT Code recognises outages • Improved visibility and planning • Shippers and traders are already familiar with managing outages • Able to quickly deploy small scale, unplanned change or maintenance activities	• Implementation cost circa £1m • Routine outages still required (but less than in the case of option 1) • There are likely to be more non routine outages than Option 1, but less than Option 2B • The need to manage the outage schedule whilst fixing operational system issues • Outages kept to a minimum	£1 million

3.3 Option 2B Non routine outage on Gemini as required

This option would remove the daily downtime window, but retain the ability to schedule non routine maintenance outages. Note that the anticipated level of non-routine outages would be higher than for option 2A and the exact timings (duration and frequency) need to be determined.

Option	Description	Pros	Cons	Estimated Costs
2B	Non routine outage as required (Note that anticipated level of non-routine outage would be higher than for option 2A)	• Renomination process availability increased (relative to option 1) • No routine outages • INT Code recognises outages	• Implementation cost circa £1m • More frequent non-routine outages (relative to option 2a) • Outages less predictable for planning and a greater amount of governance required	£1 million

3.4 Option 3 Full Availability for Gemini on a 24/7 basis

This option would provide complete availability for Gemini on a 365 day, 24/7 basis

Option	Description	Pros	Cons	Estimated Costs
3	Full Availability of Gemini on a 24/7 basis	• Maximum flexibility for Users • No planned outages • There will be no constraints on nomination activities	• Most expensive option • Not mandated by Interoperability Code • This Option could be considered as additional to the minimum level of Compliance needed	£2 million+

National Grid NTS will consider the views of all stakeholders and will subsequently engage with Ofgem prior to making a decision as to which option to implement, having regard to the existing funding arrangements for National Grid NTS as the System Operator and the Xoserve User Pays model. This approach is particularly important with regards to option 3 given that, in National Grid NTS' view it goes above and beyond what is required.

4 Consultation Questions

National Grid NTS invites the views of interested parties in relation to the options set out in this Consultation letter. In particular, we would appreciate views on:

1. Do you agree with the pros and cons of each option? If not please explain.
2. Are there any additional costs or benefits associated with any of the options identified?
3. Do you believe that there are any other options that should be considered? If so, please provide details.

4. Which option or options do you believe comply with the Interoperability Code requirement to minimise system downtime in the context of the Renominations process at IP points?
5. Which Option would you prefer to be implemented?
6. If you support option 2A, 2B or 3 would you consider User Pays to be the appropriate funding mechanism?
7. Are there any other issues that you would like to highlight that have not been addressed within this Consultation document?

5 Next Steps

National Grid NTS will take account of the views of stakeholders expressed in response to this consultation. National Grid NTS will create a Decision Document with a view to presenting the findings back to the European Workgroup in early 2015. National Grid NTS will also work with Ofgem to conclude which option to implement, taking into account the existing funding arrangements and the views provided.

Any questions or responses to this letter should be directed to Phil Lucas at phil.lucas@nationalgrid.com. Responses should be received by 24th December 2014.

Yours sincerely,

Helen Campbell
Head of Commercial Frameworks Gas
National Grid Gas Transmission

Appendix A – Gemini Housekeeping Window Overview

The primary purpose of the Gemini Housekeeping Window (GHKW) is to undertake Gemini system information backups. The secondary purpose is to restart/check the services provided by Gemini ahead of the next gas day. The maintenance window is currently 0415am to 0515am Monday to Saturday and from 4am to 6am on Sundays.

The following tasks are completed within the window:

- Database Backups ('Cold backups') of the Gemini system and other related databases (EXIT Reform/IAP)
- Housekeeping and daily refresh of services activities for daily archival of server log files and refresh of WebLogic services for better memory and disk space utilisation
- Gemini/Exit code deployment
- Various planned activities such as patching, clock change and Disaster Recovery activity, which all require an outage/server restart

The GHKW is a daily scheduled activity during which a number of services are restarted, so the Gemini system is not available during this period for the following systems components:

- Gemini/EXIT/IAP Databases
- Gemini/EXIT Application servers
- Gemini/EXIT Web cache services
- Gemini/EXIT reports services

APPENDIX 2: EXTRACT FROM MINUTES OF SEPTEMBER 2014 EUROPEAN WORKGROUP

Attendees

Les Jenkins (Chair)	(LJ)	Joint Office
Lorna Dupont (Secretary)	(LD)	Joint Office
Andrew Pearce	(AP)	BP Gas
Anna Shrigley	(AS)	ENI
Antony Miller	(AMi)	Centrica Storage
Charles Ruffell	(CR)	RWEst
Chris Shanley	(CS)	National Grid NTS
Colin Hamilton	(CH)	National Grid NTS
David Reilly	(DRe)	Ofgem
Francisco Goncalves	(FG)	Gazprom
Gerry Hoggan	(GH)	ScottishPower
Graham Jack	(GJ)	Centrica
Jeff Chandler	(JC)	SSE
John McNamara	(JM)	National Grid NTS
Julien Quainon*	(JQ)	GDF Suez
Julie Cox	(JCx)	Energy UK
Kevin Brown	(KB)	Petronas
Kirsten Elliott-Smith	(KES)	Cornwall Energy
Lucy Manning	(LM)	Interconnector UK
Marshall Hall	(MH)	Oil & Gas UK
Natasha Ranatunga	(NR)	EDF Energy
Nick Wye	(NW)	Waters Wye Associates
Nigel Sisman	(NS)	SEC
Phil Hobbins	(PH)	National Grid NTS
Phil Lucas	(PL)	National Grid NTS
Richard Fairholme*	(RF)	E.ON UK
Ritchard Hewitt	(RH)	National Grid NTS
Steve Nunnington	(SN)	Xoserve

8.2 Planned UK Link Downtime and the New Nominations Process at IPs

PL outlined the difficulties imposed on Planned UK Link Downtime by the implementation of various modifications and illustrated the ramifications for IP Renominations, and the requirements of the EU Balancing and Interoperability Codes to deliver increased system availability. The interpretation of 'minimum' was the question.

National Grid NTS put forward 3 options (together with an estimate of one-off costs) for consideration. A comparison of their advantages/disadvantages was presented in a table and discussed.

Option 2a - It was questioned whether a non-routine outage would be for a fixed period. PL responded that further details would be communicated and JM indicated that the preference would be for such an outage to happen 'out of hours'. Responding to questions on costs, National Grid NTS had an allowance to implement the EU Codes, and much would depend on whether the change could be argued to be necessary to comply with the Codes.

All cost were confirmed to be 'one-off' costs.

System impacts were outlined, with JM giving a view of what might be required to deliver increased system availability under each option. Contingencies for outage planning in the UK Link Manual were discussed and how 'minimum' might be construed. The percentage availability was not that much different to what the system is currently operates. Anything required for April 2016 needs to be addressed now.

AS believed that the 'within-day' outage would be of most concern; CS observed that traffic at that time (in the last hour) did not seem to be a lot, but National Grid NTS would like views from Shippers, to see whether any costs might outweigh any benefits to be gained in changing.

CS pointed out that adjacent TSOs and physical flows will be of more importance than at present. LM asked would behaviour be expected to change as a result of being able to use single sided or double-sided nominations? AS indicated that between 03:00 and 04:00 it would be expected to be very quiet.

PH reiterated that the Workgroup's views were sought on the preferred options and National Grid NTS would explore further with the Regulator. AS suggested that National Grid NTS should also give consideration to alignment with the closing times of the OCM and other markets. LJ suggested that how downtimes interface with other TSOs' practices and the OCM and other markets required more detail. NR suggested taking a 'wait and see' position as there was no need to change at present; response could then be made if necessary to any 'new' behaviours as EU changes progress. AS believed that deadline alignments with other market closures at least should be aligned.

LJ suggested that National Grid NTS should be consulting more widely on this; CS confirmed he would table this at other forums.

APPENDIX 3: UK LINK DOWNTIME PRESENTATION MATERIAL FROM SEPTEMBER 2014 EUROPEAN WORKGROUP

nationalgrid

Planned UK Link Downtime and the New Nominations Process at IPs



Phil Lucas
EU Workgroup: 4th Sep 2014

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Introduction

- Existing UNC terms provide for "Planned UK Link Downtime"
- UNC TPD U 1.11

  Planned UK Link downtime

  1.11.1 To enable the Transporters to operate and maintain UK Link, on each Day and/or particular Days UK Link, or (where so specified in the UK Link Manual) particular parts of UK Link, will not be operational at certain times and for certain periods ("**planned UK Link downtime**") specified in or determined in accordance with the UK Link Manual.
- UK Link Manual - IS Service Definition: Appendix 2

Performance Parameter	*Performance Period / Performance Levels*	*Notes*
Service availability: Gemini SIS Batch Transfer Communications	*23 hours per day Monday - Saturday* *22 hours Sunday* *99% of remaining time*	*Unavailability Monday - Saturday 1 hour between 0415 - 0545. Unavailability Sunday 0400 - 0600.* *Figures are exclusive of planned maintenance.*

- Current unavailability window: Monday to Saturday: 04:15 to 05:15, Sunday: 04:00 to 06:00
- Post Mod 461 unavailability window: Monday to Saturday: 03:15 to 04:15, Sunday: 03:00 to 05:00

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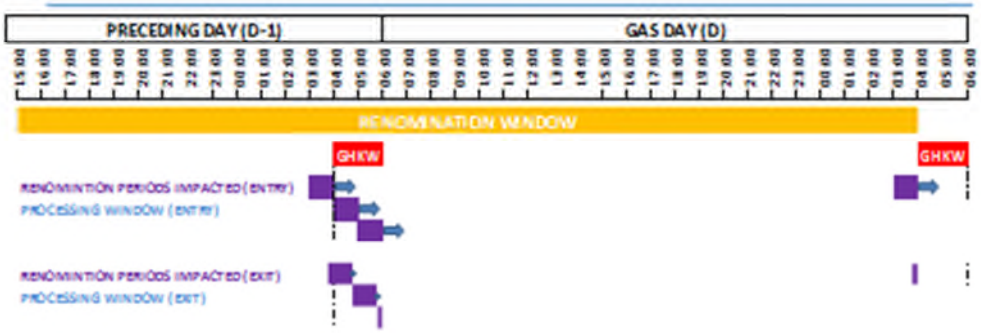
Renominations - Existing UNC Provisions



- Minimum notice periods
  - not less than 60 minutes for ENTRY AT AN IP and not less than 15 minutes for EXIT AT AN IP
- Monday to Saturday: Renomination Periods impacted
  - Entry: 03:01 – 05:15 (D-1), 03:01 – 04:00 (D) Exit: 03:46 – 05:15 (D-1), 03:46 – 04:00 (D)
- Sunday: Renomination periods impacted
  - Entry: 03:01 – 06:00 (D-1), 03:01 – 04:00 (D) Exit: 03:46 – 06:00 (D-1), 03:46 – 04:00 (D)
- Overall availability over a week: Entry noms period: 91.5%, Exit availability Exit noms period: 95.3%

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IP Renominations as proposed by Mod 0493

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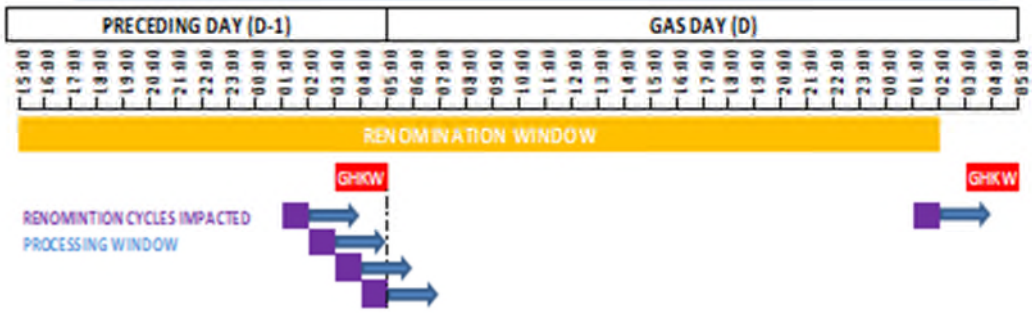

- Renomination period D-1 15:00 to 2:00 (38 hours), maximum 2 hours response timescale (Balancing Code)
- Renomination periods impacted (worst case reduces availability (over a week) to 88.5%)
  - Monday to Saturday:
    - 01:00 - 04.15 (D-1), 01:00 – 02:00 (D)
  - Sunday:
    - 01:00 - 05:00 (D-1), 01:00 – 02:00 (D)

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EU Codes

- EU Balancing Code
  - Requires implementation by 1st Oct 2015
  - Includes provisions for a Renomination period
- Interoperability Code
  - In comitology - Implementation likely to be required by April 2016
  - Comitology Version, Article 22(2)

    "Each transmission system operator shall be responsible for ensuring the availability of its own system and shall:

    (c) keep the downtime, as a consequence of planned IT maintenance, to a minimum and shall inform its counterparties in a timely manner, prior to the planned unavailability."
- Interoperability Code permits outages but 'minimum' is open to interpretation

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Options & Indicative Implementation Costs

- Option 1: Retain existing daily UK Link Downtime - (£0)
- Option 2a: A routine planned outage for 2 hours plus non-routine extended outages as required (~£1m)
  - Routine outage would need to be determined
    - Weekly, monthly, bi-monthly (preferred option is likely to be Monthly). This would require less governance and also allow for forward planning compared to 2b
    - Exact day, time period
- Option 2b: Non-routine outages as required (~£1m)
  - Anticipated level of non-routine outage would be higher than for option 2A
- Option 3: 24/7 availability (~£2m)

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Option Analysis

Option	Pros	Cons
Option 1: Do nothing	• No additional cost • Consistent with existing GB regime - Renomination process at non IPs is reduced by daily outage • INT Code recognises outages	• Reomination Process at IP s availability reduced by daily outage • Does a daily outage keep downtime "to a minimum"?
Option 2a: Routine outage (e.g monthly) and non-routine outages as required	• Renomination Process availability increased (relative to option 1) • Less frequent non routine outages (relative to option 2b) • INT Code recognises outages • Improved visibility and planning	• Implementation cost ~£1m • Routine outages still required (but less than in the case of Option 1)
Option 2b: Non-routine outages as required	• Renomination process availability increased (relative to option 1) • No routine outages • INT Code recognises outages	• Implementation cost ~£1m • More frequent non-routine outages (relative to option 2a) • Outages less predictable for planning • Greater amount of governance
Option 3: 24/7 availability	• Maximum flexibility for Users • No planned outages	• Implementation cost ~£2m • Not mandated by Interoperability Code (above and beyond)

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System Impacts

- In consultation with Xoserve, NG believe that to deliver increased system availability (via option 2 or 3) by Oct 2015 would require:
  - A project of at least 9 – 12 months costing an estimated £1m - £2m, in an already congested implementation window
    - New infrastructure to be designed, procured and built (prior to the current EU Phase 2 implementation)
    - New phases of testing to be introduced into plan (e.g. operational performance, penetration testing) - would compress the time available for UAT of EU functional change
    - Additional regression testing required on non-EU functionality
    - The project Delivery would introduce a very significant risk of slipping the EU Phase 2 release beyond winter 2015
- For options 2a or 2b and 3 a Modification maybe be required and delivery dates would need to be after October 2015 (EU phase 3 or 4)

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Next Steps

- Views sought on the options available to address this issue:
  - Continue planned UK Link downtime, which overrides renominations availability provisions (INT code supports this approach) either by:
    - Retaining existing UK Link Downtime (option 1); or
    - Introducing an enhancement to Gemini availability (options, 2a or 2b)
  - Option 3: 24/7 availability
    - Justification and funding would need to be fully considered

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Appendix:
Typical Maintenance Window Activities

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- Typical activities undertaken during the current maintenance window

Data fixes
Project deployments, including PIS Deployments
Monthly application deployments
Annual Gemini disaster recovery test
Configuration changes
Clock changes
Patching
Re-booting servers
Failovers
Table archival
Table analysis
SSL Certificate updates
Infrastructure maintenance, e.g. table space rebuild