

Change proposal:	Grid Code F/12: Treatment of Two Shifting Limit		
Decision:	The Authority ¹ directs that Option B associated with the proposed change to the Grid Code ² be made		
Target audience:	National Grid Electricity Transmission plc (NGET), Grid Code users and other interested parties		
Date of publication:	19 June 2013	Implementation Date:	19 August 2013

Background to the change proposal

National Grid Electricity Transmission plc (NGET) receives various data from users when making operational decisions as the System Operator (SO) for the National Electricity Transmission System (NETS). One generation planning data parameter which NGET may use, Two Shifting Limit (TSL), is defined in the Grid Code.³ TSL data was always taken into account by NGET in its operational decisions prior to the introduction of the New Electricity Trading Arrangements (NETA) in 2001. It has since been treated as Other Relevant Data⁴ in the Grid Code.

Recent industry discussions about the usefulness of TSL data to NGET have highlighted differences of opinion regarding the treatment of TSL in operational decision-making. Some industry parties consider that TSL should be formally defined in the Grid Code as a Dynamic Parameter⁵ which NGET must consider when making its operational decisions. TSL is standing data provided for each Operational Day⁶ by those generators who wish to do so. NGET and other industry parties consider that existing Dynamic Parameters such as Minimum Zero Time (MZT)/Minimum Non-Zero Time (MNZT) and/or Balancing Mechanism (BM) Bid Offer prices⁷ provide sufficient data to NGET so that it can manage the multiple synchronisation and de-synchronisation of generation plant. This data can be provided in flexible timescales over an Operational Day rather than as standing data.

To address this issue, the Electricity Balancing System Group (EBSG), established by the Grid Code Review Panel (GCRP), carried out an initial industry consultation which specifically asked whether TSL should be formalised as a Dynamic Parameter. There were nine responses to the initial consultation (published in March 2012), three in favour of formal definition of TSL as a Dynamic Parameter and five against, with one neutral

¹ The terms 'the Authority', 'Ofgem' and 'we' are used interchangeably in this document. Ofgem is the Office of the Gas and Electricity Markets Authority.

² This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

³ TSL is defined in Operating Code 2 as "The maximum number of times in any Operational Day that a Genset may De-Synchronise." The number of synchronisations (when generation and transmission system frequencies and phase relationships are identical) and de-synchronisations of a generator's plant are equal. TSL therefore allows generators to exercise direct control over the number of times they synchronise, and therefore de-synchronise, their plant, which may assist those generators when planning maintenance outages of their plant.

⁴ Other Relevant Data is defined in the Grid Code (Balancing Code 1.4.2(f)(v)) as 'any other factors which NGET may take account of when issuing Bid-Offer Acceptances for a BM Unit'.

⁵ Dynamic Parameters are data parameters that NGET must consider when making operational decisions and are set out in Balancing Code 1.A.1.5 of the Grid Code.

⁶ Defined in the Grid Code as "The period from 0500 hours on one day to 0500 on the following day".

⁷ As defined in the Balancing and Settlement Code.

response. The GCRP considered the responses, noting a preference from some small generators for formal definition as a less resource intensive solution for them than MZT/MNZT, as it avoids the need to maintain a 24 hour operational function.

The change proposal

NGET raised Grid Code change proposal F/12 to address the treatment of TSL in the Grid Code following the March 2012 consultation and the GCRP discussion of the responses. NGET consulted on F/12 in October 2012 setting out two options for the treatment of TSL:

- Option A – Formalise TSL as a Dynamic Parameter – this would provide users with certainty that NGET would be obligated to take account of TSL standing data submitted alongside any other data submitted as Dynamic Parameters and BM Bid Offer data, or
- Option B – Remove TSL from the Grid Code – this would give users clarity that this parameter would no longer be considered by NGET in its operational decision-making.

Should neither option be favoured, NGET expressed the view that maintaining the status quo (TSL data is treated as Other Relevant Data) could have adverse consequences for the optimum operation of generating plant connected to the NETS.

Option A would involve a number of legal text changes to the Grid Code. TSL would no longer be considered as operational planning data (as currently defined in Operating Code 2) as it would not be used in operational planning timescales. A definition of TSL would be added to the list of Dynamic Parameters set out in Balancing Code 1.A.1.5. Text to highlight that TSL data is to be submitted by fax until it can be submitted electronically to NGET's Electronic Balancing System (EBS) IT system⁸ would be added to the Balancing Code.

Option B involves fewer legal text changes to the Grid Code to remove existing references to TSL.

There were eight responses to the October 2012 F/12 consultation. Two respondents favoured Option A while five respondents favoured Option B. The remaining respondent favoured the status quo, as provision of TSL data in some form is still seen as useful to NGET as the SO, but otherwise indicated support for Option A.

NGET's recommendation

NGET recommends that TSL and any associated references should be removed from the Grid Code (Option B). NGET considers that, on balance, Option B better facilitates Applicable Grid Code Objectives (i), (ii) and (iii) and has a neutral impact on Applicable Objective (iv). In its view, Option A carries the risk of locking NGET into future commitment decisions (for up to a day) when making operational decisions and keeping certain plant running throughout an operational day which may not be the most efficient and economical plant to run for balancing purposes. They argue that these risks outweigh any potential benefits to small generators of less resource intensive

⁸ NGET expects the EBS to go live in Quarter 3 2013, with a further system upgrade in 2014 to provide electronic submission functionality.

management of their plant. By contrast, NGET considers that Option B provides it with the ability to deal in real time with more flexible plant, including intermittent generation, and be more responsive to changes in demand which would allow it to operate a more secure, efficient and economic system. NGET notes that the removal of TSL would not suit small generators which do not have a 24 hour operational function and which prefer the certainty of TSL standing data submission.

The Authority's decision

NGET initially submitted a report to the Authority on F/12 on 6 December 2012. We considered that it may help generators better understand how they could use dynamic parameters to achieve similar operational outcomes to those using TSL, in a cost effective way, if there was appropriate guidance produced by NGET with industry agreement.

On 14 May 2013, NGET resubmitted the final report for F/12 to the Authority. This was identical to the report of 6 December 2012 except that it included the guidance note entitled, "Managing the number of unit starts" developed with the assistance of industry. The report stated that this guidance note took account of industry views through various bilateral discussions, input from the EBSG and (by email) the views of the GCRP.

At the GCRP meeting on 15 May 2013, the GCRP expressed support for the guidance note.⁹

We have considered the issues raised by the change proposal and in the final report dated 14 May 2013. We have considered and taken into account the responses to NGET's consultation on the change proposal which are included in the final report¹⁰. We have concluded that:

1. implementation of the change proposal through Option B will better facilitate the achievement of the objectives of the Grid Code¹¹; and
2. approving the change is consistent with the Authority's principal objective and statutory duties¹².

Reasons for our decision

We have set out our reasons against those Applicable Grid Code Objectives which we consider are relevant to our decision. In respect of the other Applicable Objectives, there is either no impact or a neutral impact.

Applicable Objective (i) 'to permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity'

We note the mixed views about which of Options A and B will improve the efficient operation of the transmission system and better facilitate this objective.

⁹ The relevant draft minutes of the May 2013, specifically Minute 3148, are published on NGET's website: <http://www.nationalgrid.com/NR/rdonlyres/DCF11F09-BBAE-4970-8D77-C020D3603A2F/60930/MayGCRPminutesDRAFT.pdf>

¹⁰ Grid Code proposals, final reports and representations can be viewed on NGET's website at: <http://www.nationalgrid.com/uk/Electricity/Codes/gridcode/consultationpapers/>

¹¹ As set out in Standard Condition C14(1)(b) of NGET's Transmission Licence, see: http://epr.ofgem.gov.uk/document_fetch.php?documentid=14343

¹² The Authority's statutory duties are wider than matters which NGET must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

Those who support Option B suggest that the TSL data, as standing data, provides inefficient signals to the SO regarding operational capability and, in a more dynamic environment with more flexible plant connected to the transmission system, would hinder the SO from making efficient balancing decisions. In particular, they indicate that greater flexibility can be achieved without the use of TSL data through alternatives such as existing Dynamic Parameters (MZT/MNZT) and through BM Bid Offer data. Option A, it is suggested, would also limit the efficient use of BM data as the SO would be locked into using TSL data from some users throughout an Operational Day instead of relying on real time data. This could potentially increase the level of Balancing Services Use of System (BSUoS) costs across all market participants.

Those who support Option A suggest that TSL data does assist the SO as it makes it transparent which generating plant is operating within limitations and the reasons for doing so. They consider that this is additional information for the SO which would allow it to make more effective operational decisions. In addition, they consider that those generators providing TSL data can more effectively manage their plant outages and extend the life of this plant.

We accept that there is a fine balance between the arguments above. On the one hand, we understand that generators need to be able to clearly and accurately describe the dynamic operational limits of their plant to NGET as simply as possible and that NGET should be obligated to respect these limits. On the other hand, NGET should not be unnecessarily constrained by arbitrary limits that potentially reduce operational flexibility. In a more dynamic operational environment, with increasing amounts of intermittent generation connecting to the NETS, the SO would find real time data more helpful when making its operational decisions. The costs of these decisions are reflected in BSUoS costs shared by all market participants and NGET is incentivised to keep these costs low to ensure economic and efficient system operation.

While we note that the operational characteristics of certain plant will be relevant to the SO when making its decisions, we also recognise that there are alternative ways to obtain this information which does not involve the use of the TSL parameter. The industry consultation highlighted the availability of alternative Dynamic Parameter data (MZT/MNZT) and/or Bid Offer data as alternatives which are more in keeping with a dynamic operational environment. We note that some small generators may not have 24 hour operational capability which may limit their ability to respond dynamically to the SO regarding the operational profile of their plant. We set out our views on this below.

On balance, and taking into account the views of industry respondents, we consider that the removal of TSL from the Grid Code (Option B) better facilitates the efficient and economic operation of the NETS than if TSL is defined as a Dynamic Parameter that the SO must consider in its operational decisions (Option A).

Applicable Objective (ii) 'to facilitate competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity)'

We note that there are also mixed views about whether either of Options A or B better facilitate this objective.

Those who support Option B suggest that the removal of the TSL parameter would have competitive benefits by ensuring that the SO is not locked into certain operational decisions by those generators which submit TSL standing data. They consider that the impact of Option B would be that the SO would have more room to consider dynamic data in real time which may lead to more efficient and competitive operational decisions.

Those who support Option A suggest that small generators which have limited ability to give instructions regarding their operational capability because they do not have 24 hour operational capability would be adversely affected, leading to adverse consequences for competition. For example, they consider that these small generators would be less able to participate effectively in the BM, they may be considered responsible for higher constraint costs due to their lack of flexibility, and their operational limitations would not be easily visible to the market. One further consequence identified is that small generators with limited operational capability may be less able to run and maintain their plant at optimum efficiency.

We agree that there is a fine balance between judging the positive and adverse competition impacts of either option. In our view, there is no strong quantitative evidence about the impact on small generators and the degree to which they are adversely affected by the removal of the TSL parameter. Similarly, no strong quantitative evidence is provided about whether the benefit of using the alternative Dynamic Parameters and Bid Offer data outweighs any costs to the wider market of defining TSL as a Dynamic Parameter.

We agree that, at a qualitative level, there does seem to be a benefit to the SO to make operational decisions flexibly and with real time data that supports its decision-making.

Previous consultations on TSL have not raised widespread concerns from the small generator community. The wider market, including small generators, will benefit from the guidance produced by NGET clarifying the use of data parameters. Thereafter, removal of TSL will further clarify for generators which participate in the market the requirement to use alternative Dynamic Parameters and Bid Offer data to effectively communicate to NGET the operational capability of their plant. This should assist the SO in making operational decisions in a dynamic environment.

We agree, on balance, that implementation of Option B would better facilitate this objective.

Applicable Objective (iii) 'subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole'

We note that industry views regarding whether Option A or B helps to promote system security are similar to those raised in respect of the other objectives.

We agree that the overall impact of the removal of the TSL parameter should ensure there is clarity regarding which data the SO is considering in its operational decision-making. The use of dynamic real time data should assist the SO in making decisions on the basis of the efficient and economic operation of the NETS. The benefits are that there should be an overall reduction in the costs of system operation and lower BSUoS costs for all market participants as a result. Efficient and economic operation should also send appropriate signals to market participants about investment in generation which should ensure that system security is maintained and enhanced.

We therefore agree that implementation of Option B would better facilitate this objective.

Decision notice

In accordance with Standard Condition C14 of NGET's Transmission Licence, the Authority, hereby directs that Option B of change proposal Grid Code F/12: *'Treatment of Two Shifting Limit'* be made as recommended by NGET.

Paul Branston

Associate Partner, Costs and Outputs

Signed on behalf of the Authority and authorised for that purpose