

Grid Code Review Panel

Two Shifting Limits

A paper by National Grid

Summary of Issue

1. Operating Code 2 (OC2) of the Grid Code introduces the concept of a Two-Shifting Limit. It is listed as part of a suite of Generation Planning Parameters that each generator should submit to National Grid as part of its Week 24 data submissions and subsequently should it need to update them.
2. A query has been raised around National Grid's interpretation and use of the parameter and specifically its interpretation of the parameter when issuing Bid-Offer Acceptances

Grid Code Context

3. This section aims to explain the Grid Code references to the term Two Shifting Limit and its usage therein.
4. OC2.3.2 sets out the requirements for Generators to submit their Generation Planning Parameters. One of these is the Two Shifting Limit. It is defined within the Grid Code as:

Two Shifting Limit

The maximum number of times in any **Operational Day** that a **Genset** may **De-Synchronise**.

5. OC2.4.2.1 (i) then further states that:

OC2.4.2.1 (i) The **Generation Planning Parameters** supplied under OC2.4.2.1 shall be used by **NGET** for operational planning purposes only and not in connection with the operation of the **Balancing Mechanism** (subject as otherwise permitted in the **BCs**).

6. The Balancing Codes do not reference the Two Shifting Limit. National Grid has an obligation to issue Bid-Offer Acceptances that are consistent with Export and Import Limits, QPNs and Dynamic Parameters in accordance with BC2.7.2. The Two Shifting Limit is not an Export or Import Limit, a QPN or a Dynamic Parameter.
7. BC2.7.2 (a) does state that National Grid may also recognise "Other Relevant Data" provided or modified under BC1 or BC2. "Other Relevant Data" is defined by BC1.4.2 (f). Neither does this clause reference Two Shifting Limits although part (v) does state that BM Participants shall submit:

"details of any other factors that **NGET** may take account of when issuing **Bid-Offer Acceptances** for a **BM Unit** (e.g. **Synchronising** or **De-Synchronising** Intervals, the minimum notice required to cancel a **Synchronisation**, etc); and"

8. There are no other references or inferences to the term Two Shifting Limit in the Grid Code.

9. To summarise, it is National Grid's view that the Grid Code is clear that the parameter represented by the Two Shifting Limit will be used for operational planning purposes only and not in connection with the Balancing Mechanism. Even where a BM Participant submits Two Shifting Limits to National Grid under BC1.4.2 (f) (v) National Grid's view is that it is under no obligation to utilise them or issue Bid-Offer Acceptances in accordance with them.

National Grid Usage of Two Shifting Limits in Balancing Mechanism Activities

10. National Grid's view is that it is under no obligation to be consistent with any Two Shifting Limit parameters submitted by BM Participants when formulating Bid-Offer Acceptances. On the rare occasions when operational circumstances arise whereby a BM Participant requests that this parameter be taken into account by National Grid, National Grid has formulated its own internal working policy on the issue.
11. This internal policy states that should the Control Engineer decide, at their own discretion, to account for the Two Shifting Limit when formulating Bid-Offer Acceptances, then the Two Shifting Limit should be treated as the number of De-Synchronisations that are available to National Grid in the Balancing Mechanism only, i.e. it does not include any De-Synchronisations that a BM Participant may initiate through its Physical Notification (PN) submissions.
12. This policy exists primarily because National Grid has no influence over the actions of BM Participants in relation to its PN submissions. Non-zero PNs may be submitted or removed by a BM Participant at any time prior to Gate Closure and thus it is only practical, should the Control Engineer have taken the decision to account for the Two-Shifting Limit, to apply it only to actions within that Control Engineer's control, namely Bid-Offer Acceptances. National Grid also notes that this interpretation could be considered consistent with the treatment of other Grid Code parameters that apply to National Grid actions only and not actions by generators – for instance a Generator's PN submissions do not need to be consistent with submitted Dynamic Parameters.
13. It is for precisely the reason of ambiguity and complexity of the Two Shifting Limit that National Grid's general policy is not to use the Two Shifting Limit when formulating its Bid-Offer Acceptances. National Grid will ensure that any Bid-Offer Acceptance issued is consistent with the prevailing Dynamic Parameters submitted by the Unit including its Minimum Zero Time (MZT), Minimum Non-Zero Time (MNZT), Run-Up Rates and Run-Down Rates and any other prevailing non-zero PNs in existence at the time of issue.

Way Forward

14. National Grid believes that the definition and primary usage of the Two Shifting Limit as **an operational planning parameter only** is well defined within the current Grid Code.
15. National Grid does however believe that while the lack of any obligation to use the Two Shifting Limit when considering Bid-Offer Acceptances is similarly unambiguous, should it be used on a discretionary basis by National Grid then there is potential for confusion over its status and meaning.

16. Notwithstanding any future Grid Code changes in this area, National Grid believes that due to this potential confusion BM Participants should not place any reliance on the Two Shifting Limit when submitting data under BC1 or BC2. Generators should continue to submit the parameter in accordance with OC2 in accordance with its function as an operational planning parameter. BM Participants should only rely on Export and Import Limits, QPNs and Dynamic Parameters for BM activities.
17. Should GCRP members believe that this paper clarifies the circumstances around which the Two Shifting Limit should be submitted by Generators and utilised by all Users, National Grid believes that no further action is required. Therefore Option (a) proposed by National Grid in this paper is that no changes to the Grid Code need to be made.
18. However should GCRP members believe that further action is required and specifically changes to the Grid Code are needed, then the following are two further options to examine:
- b) **Clarification of usage within the BCs:** The Balancing Codes could be clarified to state which parameters National Grid will be obliged to be consistent with when issuing Bid-Order Acceptances (if any).
 - c) **Removal of the Two-Shifting Limit Parameter from the Grid Code:** Although a mandatory data submission under OC2, National Grid does not routinely utilise the Two Shifting Limit parameter as part of its operational planning process. National Grid would therefore not object to its removal from the Grid Code in the hope that it would remove any uncertainty currently caused by its presence in the Grid Code.

Option (b) – Clarification of Usage within the Balancing Codes

19. Under this proposal a holistic review of the parameters that may be taken into account by NGET when issuing Bid-Order Acceptances, including the Two Shifting Limit, would be initiated. The ultimate aim would be to differentiate between the parameters that shall be taken account of by NGET when issuing Bid-Order Acceptances and which shall not. A full appraisal of the benefits and disadvantages of the inclusion of each parameter will be required together with an assessment of any unintended consequences that might ensue should a parameter become a mandatory consideration.
20. Ultimately the current wording in BC1.4.2 (f) (v) would be amended to clarify which “other parameters” shall be taken into account by NGET when issuing Bid-Order Acceptances. BC2.7.2 may also need to be updated.

Option (c) – Removal of the Two-Shifting Limit Parameter from the Grid Code

21. This option would have a narrower remit than option (b) and would be to specifically remove the Two Shifting Limit within the Grid Code and through its removal clarify that it is in effect a defunct parameter. As National Grid’s view is that the Two Shifting Limit is not and needs not be actively used in any planning, operational or balancing process, its removal from the Grid Code in its entirety would therefore remove any confusion as to its purpose and use.

GCRP Recommendation

22. The GCRP is invited to:

CONSIDER the policy and interpretive advice given by this paper; and,

RECOMMEND which course of action it feels is most appropriate when considering amendments to the Grid Code:

- a) Do Nothing, and acknowledge that this paper and the existing Grid Code clarify the use and purpose of the Two Shifting Limit parameter
- b) Clarify the usage of “other factors” in the Balancing Codes in the context of the issue of Bid-Offer Acceptances including Two Shifting Limits
- c) Remove the Two Shifting Limit Parameter from the Grid Code.