Nemo Link Interconnector between Belgium and Great Britain

Methodology Statement for Determination of System-to-System Flows

---

1. Requirement for Methodology Statement

1.1 This Methodology Statement is produced for the purposes of paragraph 7.5 of Section R of the Balancing and Settlement Code (BSC).

2. Objective of Methodology

2.1 The methodology given in section 3 below describes the basis on which the system-to-system flow will be determined for the purposes of paragraph 7.5.3 of Section R of the BSC. This description is supported by the information on implementation of the methodology set out in section 4.

3. Methodology

3.1 The system-to-system flow will be determined from co-ordinated Interconnector instructions issued by the System Operator (NESO) or the Externally Interconnected System Operator (Elia Transmission Belgium N.V./S.A.). The acceptance by the Transmission Company of any Bid or Offer submitted by an Interconnector User in respect of an Interconnector BM Unit does not constitute an Interconnector instruction in this Methodology nor does un-co-ordinated actions e.g. Emergency Instruction and Operational Tripping Scheme

3.2 The system-to-system flow will be determined in a manner consistent with paragraph 7.5 of Section R of the BSC. Accordingly any system-to-system flow on the Interconnector will not affect, or form part of, the Interconnector Scheduled Transfer (IST). If the difference between the IST and the physical capability of the Interconnector is reduced after an Interconnector instruction has been issued the system-to-system flow may be reduced as necessary.

4. Implementation

4.1 The implementation of this methodology is agreed between NESO and NLL. For information purposes an outline of the current plans to implement this methodology is given in Appendix A. However NESO recognises that any material changes to the way in which the methodology is implemented (as described in Appendix A) will require a revised Statement to be resubmitted to the Authority for further approval.

5. Definitions

5.1.1 Unless stated otherwise, terms and expressions used in this methodology statement shall have the same meanings given to them in the BSC.

Appendix A

Operational Process for Determining the System-System Flow on the NLL Interconnector

A1   Calculate the Interconnector Scheduled Transfer (IST)

The Interconnector Scheduled Transfer is based on Nemo Link Nominations (NN) submitted by Interconnector Users. NN data will be consistent with Physical Notifications submitted to NESO by Nemo Link acting on behalf of Interconnector Users, and must be within the Net Transfer Capability (NTC) as defined in the Operating Protocol.

A2   Calculate the Scheduled Nemo Link Reference Program (ICRP)

The Scheduled Nemo Link Reference Program (ICRP) is based on the same data that is used to determine the IST. The ICRP will, as far as possible, give the same energy transfer in each trading period as the ICRP data used to determine the IST, within the agreed dynamic characteristic for the Interconnector.

There will be a day-ahead and a intraday Nemo Link Reference Program (ICRP) sent to NESO and it must be within the Net Transfer Capability (NTC) as defined in the Operating Protocol after the outturn of the day ahead auction and the intraday auction retrospectively. The ICRP is the base against which System-System Flows (SSF) will be calculated.

A3   Variations to the ICRP

After the ICRP has been agreed it may be necessary to vary the Nemo Link Reference Program (ICRP). This will constitute a system-to-system flow (which may for example be recorded as Emergency Assistance) unless for reasons as specified in paragraph 7 of section R of the BSC or as a result of an un-coordinated action.

A4   Volume of System-to-System Changes

Where the instruction to change the ICRP has been given for a reason that will give rise to a system-to system flow, then the change to the ICRP will be a system-to-system change. The volume associated with a system-to-system change will be calculated from the previous ICRP as described below:

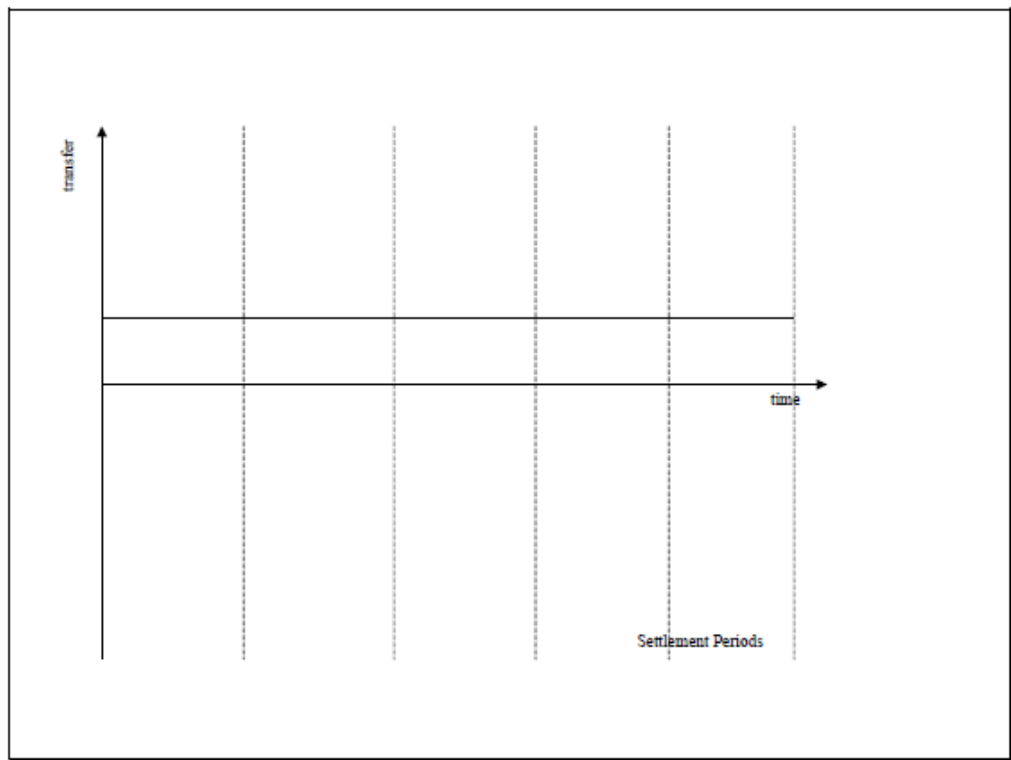Consider the simple ICRP shown in figure 1.

Figure 1 Reference Programme

NESO makes a request to vary the ICRP (this request being accepted by the other party) or a request is issued automatically by equipment armed by NESO or Nemo Link to respond to events on the Total System or the External System.
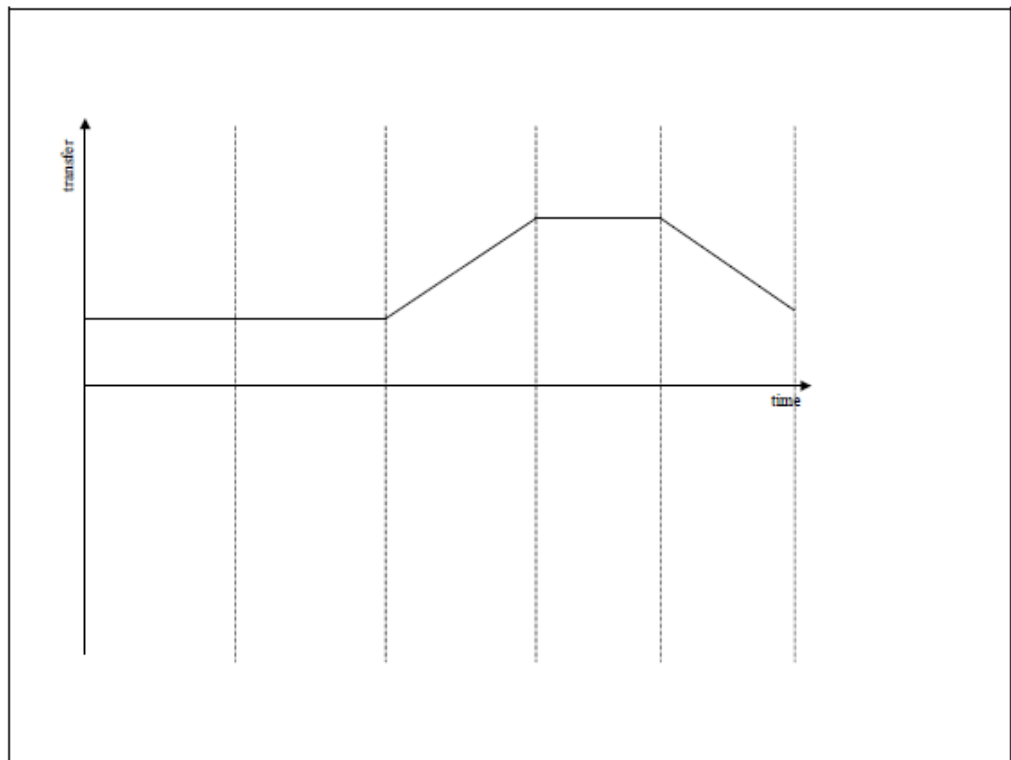

Figure 2 ICRP revised for system-to-system flow

The change in the instructed transfer in settlement period j, caused by acceptance of coordinated Interconnector instruction is given by:

$$\Delta T_{n,j} = \sum_{s}^{j} \max\left(ICMIN_s, \min\left(ICMAX_s, PT_{n,s}\right)\right) - \max\left(ICMIN_s, \min\left(ICMAX_s, PT_{(n-1),s}\right)\right)\partial t$$

Where

$ICMAX_s$	Is the maximum actual instantaneous Interconnector Capability at second s (MPTC);
$ICMIN_s$	Is the minimum actual instantaneous Interconnector Capability at second s (MPTC);
$PT_{n,s}$	Is the programmed instantaneous transfer as at second s as a result of an agreed trade. A positive value denotes a flow from BE to England. The value is in MW at the English end of the Interconnector. Where a trade is agreed and a new reference programme is not provided NESO will create this for the purpose of settlement;
$PT_{(n-1),s}$	Is the programmed instantaneous transfer at second s prior to the trade being agreed. A positive value denotes a flow from BE to England. The value is in MW at the English end of the Interconnector. Where a trade is agreed and a reference programme is not provided NESO will create this for the purpose of settlement;
$\sum_{s}^{j}$	Sum over all seconds in settlement period j;
$\Delta T_{n,j}$	Is the change in transfer volume resulting from acceptance of co-ordinated Interconnector Services in settlement period j;

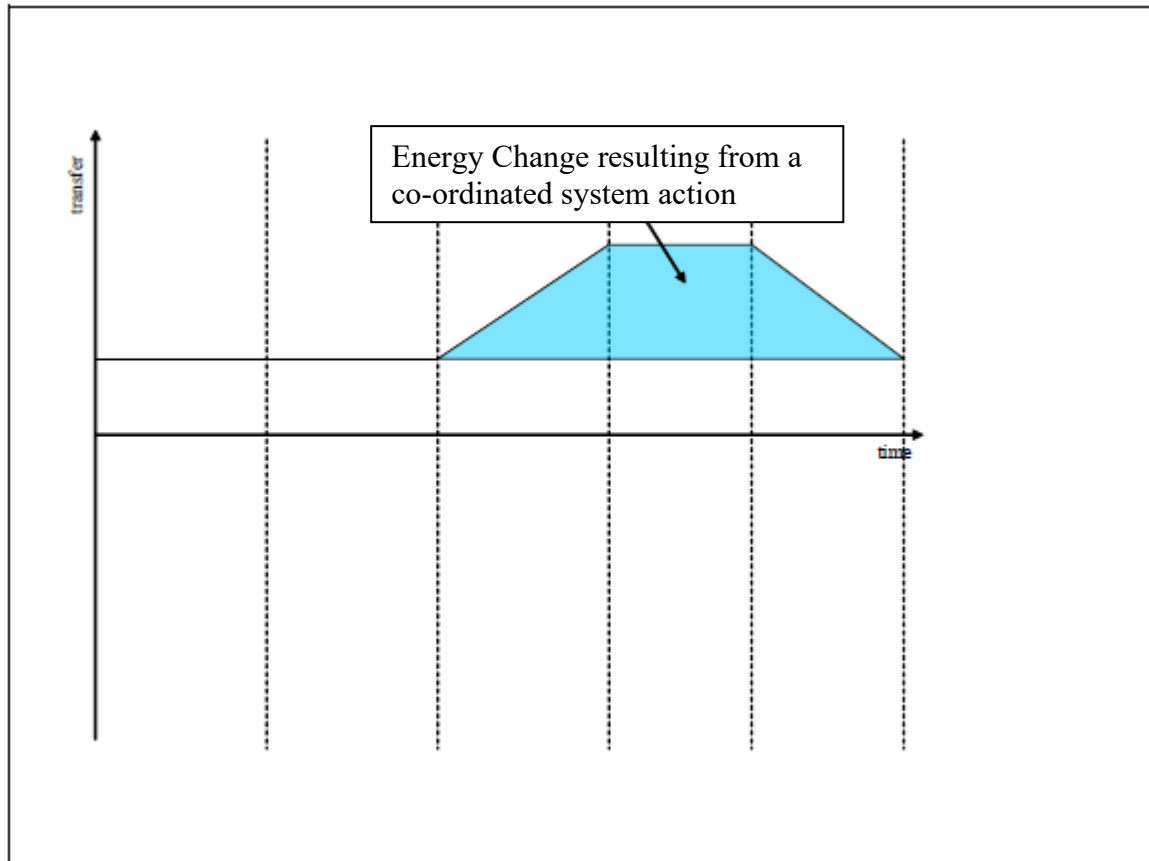This is shown graphically below:

Figure 3: Change in instructed transfer volume arising from change in ICRP as a result of co-ordinated system action

The total volume of system-to-system change (T_j) will be the sum of all changes in instructed transfer volume arising due to co-ordinated system-to-system flows.

SO-SO Trades under the Channel Redispatch and Countertrading Methodology (RD/CT Methodology) will be conducted from the outturn of the Day Ahead Auction to 30 minutes ahead of the relevant Settlement Period. In these timescales, the interconnector is able to submit a new reference programme reflecting the trades.

A5   Volume of System-to-System Flow (SSF)

The ICRP and the total volume of system-to-system change are calculated at the English end of the Nemo Link Interconnector. Hence interconnector losses have already been accounted for in these values.

A6   Metered Volume for Transmission Company Interconnector BM Units

The system-to-system flow is calculated and the Metered Volume allocated to the Transmission Company Interconnector BM Units (TCIBMU) as shown below:

(SSF=System to System Flow)

If direction of SSF is from Belgium to England SSF = T_j

TCIBMU(Production) = SSF   TCIBMU(Consumption) = 0

If direction of SSF is from England to Belgium SSF = T_j

TCIBMU(Production) = 0   TCIBMU(Consumption) = SSF

A7   Revisions to Appendix A

This appendix is provided for information purposes only. If material changes occur to the planned operational process for determining the system-to-system flow on the Nemo Link Interconnector, then this appendix will be revised accordingly to show the revisions.

Revision No. 1 (effective from 1st April 2020)

Section A2 – This has been updated to reflect the introduction of an intraday market by NLL.

Revision No. 2 (effective from 1st April 2025)

The acronyms of NGESO have been replaced with NESO to reflect the legal separation on 1st October 2024.