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Re

Code Change Proposal to Prevent Undesirable Balancing Behaviour

Dear Ms Leijten,

This letter contains a proposal by the joint network operators to amend the conditions as referred to in article 12b, paragraph 1, part a, of the Dutch Gas Act. This relates to the Transmission Code Gas TSO.

Reason for the proposal

This proposal was prompted by GTS' observation that undesirable balancing behaviour is being displayed by a number of recognised programme-responsible parties (hereinafter: recognised PRPs). Undesirable balancing behaviour is shipper behaviour that has a negative effect on operations to keep GTS's network in balance. Undesirable balancing behaviour can lead to a greater system imbalance than might have been expected based on the physical circumstances. It has led to unnecessary dynamics in the network and to an unnecessarily high number of balancing actions.

For GTS and national grid users it is important that the network is and remains in balance and that recognised PRPs contribute towards this and do not work against it.

Undesirable balancing behaviour is also not in line with the requirements of the European Network Code on Gas Balancing of Transmission Networks (hereinafter: BAL NC). This is because BAL NC intends to ensure that recognised PRPs balance their portfolio in such a way that the need for GTS to carry out balancing actions is minimised.

The proposal intends to specify undesirable balancing behaviour in more detail and to make such behaviour subject to consequences so that it will no longer occur.

Outline of the proposal

Undesirable balancing behaviour is defined as behaviour that does not correspond to what can be expected from a prudent recognised PRP. As is clear from BAL NC, recognised PRPs are expected to keep their portfolios in balance as much as possible, so as to minimise the need for GTS to carry out

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balancing actions¹. However, GTS has found that, in situations where the system is out of balance or is starting to become imbalanced, a small group of recognised PRPs are increasing this system imbalance by building up a larger imbalance with their own portfolio. This means that they are not meeting the requirements of article 4 of BAL NC, for they are not preventing a balancing action but causing one. The proposal lays down in which situations which behaviour is no longer acceptable and where this constitutes undesirable balancing behaviour that contravenes the principles of BAL NC.

It also states that GTS will act in the event of undesirable balancing behaviour by imposing a financial charge and that, if there is substantial undesirable balancing behaviour the recognised PRP's licence may be withdrawn.

Contents of the proposal

The code texts with the proposed changes are included in annex 1 to this letter.

Text to be added is coloured **green**. Text to be removed is coloured **red** and crossed out.

Explanatory notes to the proposal

Preparation of the proposal

Several relevant developments have led to this proposal.

1. Since 2017, there have been discussions on whether the so-called Linepack Flexibility Service factor (hereinafter: LFS factor) should be adjusted. In March 2017 the Netherlands Authority for Consumers and Markets (ACM), asked GTS to submit a code change proposal to adjust this factor (from 0.4% to 0.8%). In June 2017, the joint network operators submitted a code change proposal to the Electricity and Gas Networks Users' Platform (Gebruikersplatform elektriciteits- en gasnetten (GEN)). However, this was rejected by several representative organisations. In March 2018 a new proposal was submitted to GEN in which the LFS factor would be the result of a formula. The formula presented in this proposal led to an undesirable result (5.5%) due to outliers in the information used. This proposal was withdrawn again in November 2018, in order to first investigate whether and how the formula could be made resistant to all kinds of possible outliers.
2. In 2019 and 2020 GTS evaluated the balancing system. This evaluation showed that experiences with the existing balancing system are positive and that the balancing system is simple, robust, effective and future-proof. It was found that the current balancing system is in line with BAL NC. This was also confirmed in the recent ACER Market Monitoring report². In market sessions on 1 July and 21 September 2021, many recognised PRPs also indicated that their experiences with the existing balancing system were positive and that the balancing system is simple, robust, effective and future-proof and that information (provision) by GTS is excellent. There is therefore no need for any fundamental change to the current balancing system.
3. GTS and ICE Endex have found that a number of recognised PRPs jeopardised fair and orderly price formation during GTS's balancing actions by carrying out significant purchase and sales transactions a few seconds before GTS implemented balancing actions. GTS, in cooperation with ICE ENDEX, discussed this issue with market parties in spring 2020, and at this point the proposal to vary the timing of a balancing action was also seen by the market as a

¹ Art. 4 paragraph 1 BAL NC

² ACER Balancing Monitoring Report 2019/20, p. 27-28.

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good way forward. As of 3 September 2020, the timing of a balancing action by GTS will take place at a random moment between 21 and 22 minutes after the start of the hour ('randomisation'). This has proved successful in terms of price formation. This is clear from an evaluation by ICE ENDEX that was also presented in GTS' market session on 1 July 2021. There was an expectation that this would also resolve the undesirable balancing behaviour but unfortunately this is not the case.

- Following the evaluation of the balancing system, GTS held constructive consultations with ACM. These consultations have shown, among other things, that increasing the LFS factor will not put an end to the undesirable balancing behaviour. This is because the balancing behaviour of the recognised PRPs concerned is such that their position at the end of the gas day is frequently close to 0. Increasing the LFS factor would therefore not be an effective means of curbing undesirable balancing behaviour.

GTS has, in consultation with ACM and based on both parties' enhanced insight, come to the conclusion that the emphasis should be on preventing undesirable balancing behaviour because this would improve the principles of the market mechanism. Increasing the LFS factor to 0.8% alone, as was originally instructed, is therefore off the table.

This proposal therefore focuses on defining undesirable balancing behaviour and on establishing consequences if, nevertheless, undesirable balancing behaviour does occur.

What about market-based balancing?

Following the introduction of BAL NC in 2014, market-based balancing in the Netherlands, which started in 2011, was to some extent adjusted to be in line with the Regulation (including the bid price ladder being replaced by buying/selling gas in balancing actions via the ICE ENDEX exchange).

Since the introduction of the market-based balancing system, recognised PRPs are also balance-responsible parties and are therefore primarily responsible for balancing their own portfolio(s).

Article 4.1 from BAL NC describes the responsibility as follows: *The network users shall be responsible for balancing their balancing portfolios in order to minimise the need for transmission system operators to undertake balancing actions, as set out under this Regulation.*

The recognised PRPs are given insight from GTS into their own imbalance position (POS) and into the balance position of the whole system (SBS) every five minutes and are thus able to adjust their portfolio if necessary. Gas transport takes place 24/7 and so portfolio imbalance monitoring must also be carried out 24/7. A recognised PRP must "in all respects declare that it has the skill and care, and the technical, administrative and organisational facilities required in order to be able to participate in gas transmission in the national transmission system and conduct itself accordingly". This is one of the requirements for recognition as laid down in article 3.2.0 of the Transmission Code Gas TSO. As far as GTS is concerned, this also includes 24/7 monitoring and portfolio adjustment by recognised PRPs.

If the SBS moves out of the dark green zone, GTS will perform a balancing action. If the system is short, sufficient gas is bought on the ICE ENDEX exchange to return the SBS to the boundary of the dark green zone. If the system is long, GTS sells gas in a similar manner. These balancing actions take place automatically and the related costs/revenues are passed on 1 to 1 to the recognised PRPs causing the imbalance. No additional financial charges are levied, in fact GTS is performing a transaction that the recognised PRPs could have or should have performed themselves on the exchange just before this.

Observed behaviour

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GTS has doubted for some time whether the balancing behaviour of some recognised PRPs is in line with BAL NC regulations and/or its intentions. GTS feels that some recognised PRPs have too high a portfolio imbalance too frequently. In any case, in such cases it appears that there is no physical necessity/cause making such a high imbalance unavoidable. It seems that such behaviour stems from commercial considerations.

Now, there is nothing against that a priori, indeed, that lively and liquid trading is possible in the TTF market area is in everyone's best interest. The main consideration is to keep it that way, but combined with desirable balancing behaviour by recognised PRPs (i.e. according to BAL NC, aimed at minimising the required balancing actions by GTS). The observed (and undesirable) balancing behaviour may, after all, also have adverse financial consequences for recognised PRPs who do not display such behaviour (for they will also receive an invoice if they are if they are co-causer of a balancing action).

Furthermore, GTS has observed that it seems that some recognised PRPs deliberately strive for a high imbalance in order to force a balancing action. This is in the interests of those parties because they are also active on the exchange as suppliers. They then buy/sell a larger volume on the exchange at an attractive price, while they, as the causer of the balancing action, benefit from a lower price (i.e. a volume-weighted exchange price) passed on from GTS for a smaller volume (as a result of the balancing actions performed). Moreover, parties deliver the sold next-hour product from their POS, and in doing so deliver an EOD product because they adjust their POS gradually, over many hours, instead of doing it all at once in the next hour.

The market sessions have shown that the market also wants to eradicate this undesirable balancing behaviour.

Currently there are no further regulations on when a recognised PRP is balancing its portfolio in such a way that it can be said that, by behaving in this way, this recognised PRP is no longer minimising the number of balancing actions to be taken by GTS and is therefore infringing article 4.1 of BAL NC. The proposal provides a framework for this.

Further analysis

GTS has collected data for the period January 2019 to mid-2021 and has started to identify recognised PRPs with a portfolio imbalance (at any moment) greater than 15% of the maximum value of the dark green zone over that period, both long and short.

This gave GTS a first impression of which parties regularly had a high imbalance in that period.

It appears that recognised PRPs with a significant physical component (large physical entry or large physical exit or both) regularly have a higher imbalance than the 15% mentioned above. This in itself is not surprising given natural physical variations, especially in the LDC network where gas demand is significantly affected by the weather. An imbalance can certainly build up quickly with unexpected large physical deviations and/or disruptions.

On the other hand, an Operational Balancing Agreement (OBA) is now active at all IPs, at most storage points and at GATE. At such points the imbalance risk is limited as allocation is equal to the confirmed nomination.

Small field production points do not have any OBAs, but they generally produce as much as possible, where the maximum is known and within-day variations are generally limited.

Demand on the domestic market (OV) is temperature-dependent. Total demand can be predicted reasonably easily, subdivision into the different portfolios can, of course, contain deviations from the anticipated sales.

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In short, physically-oriented portfolios have logical physical variations, and do not, in GTS's opinion, need to have a very large imbalance because most physical flows can be estimated fairly easily and part of the imbalance risk is limited in any case due to the OBAs.

Where balancing actions are performed automatically by GTS without any charges, there are not actually any additional costs involved with gas sales or purchases via a balancing action for a recognised PRP. Although this is explicitly not the intention, a recognised PRP may see this as a free 24/7 service provided by GTS and may, therefore, perhaps incorrectly, pay less attention to monitoring its portfolio 24/7 and to adjusting it in good time in the event of large imbalances. Recognised PRPs remain at all times not only responsible themselves for the balance in their portfolio but should also do this in such a way that the need for GTS to take balancing actions is minimised (article 4.1 BAL NC). Proper 24/7 monitoring by the recognised PRP is a simple and effective way of preventing or minimising a large imbalance.

Another category that regularly shows a large imbalance consists of recognised PRPs with a small physical portfolio. It should be noted that a large imbalance can occur in this group even though the risk of a large physical imbalance is small. This means that commercial trading behaviour, which at GTS is expressed in TTF allocations, has a significant impact on the portfolio imbalance. Therefore, where steering takes place via the TTF to create a high imbalance, steering should have taken place via that same TTF (just as easily) to create a smaller imbalance. We consider that first type of behaviour (deliberately steering via the TTF to create a high imbalance) undesirable, the second type of behaviour (steering via the TTF to create a smaller imbalance) precisely in line with BAL NC. Moreover, it occurs that a large imbalance is created in a small physical portfolio by building up an imbalance for several hours in a row. Better 24/7 monitoring followed by steering in the right direction is the required solution.

Contents of the proposal

If the following (cumulative) factual circumstances and behaviour of the recognised PRP can be seen, the behaviour of a recognised PRP will be considered as undesirable balancing behaviour at that hour. The recognised PRP has then not done enough to prevent the balancing action concerned. He is acting at that moment in contravention of article 4, paragraph 1 of the Network Code on Gas Balancing of Transmission Networks (BAL NC) :

1. The System Balance Signal is outside the dark green zone during the hour concerned.

Explanatory notes: The balancing system is based on near-real-time information regarding the cumulative balancing position of every recognised PRP (portfolio imbalance signal or POS) and of the system (system balance signal or SBS) as a whole. The SBS is equal to the sum of all POSs and reflects the balance position of the network. The dark green zone is the zone within which the SBS can move without the need for balancing actions. The system is then sufficiently in balance, any variations within the dark green zone can be absorbed by buffering within the GTS network. If the end-of-hour prediction of the SBS exceeds the permissible limits, GTS will perform a balancing action. The purpose of a balancing action is to bring the SBS back to the boundary of the dark green zone.

2. The recognised PRP is the co-causer of the system imbalance in the hour concerned.

Explanatory notes: the portfolio imbalance of the recognised PRP is in the same direction as the SBS; the recognised PRP has contributed to the fact that the SBS has moved outside the dark green zone

3. There is too great a portfolio imbalance in the hour concerned: the absolute value of the POS is

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greater than 15% of the boundary value of the dark green zone.

Explanatory notes: The size of the portfolio imbalance position contributes significantly to the system imbalance. The recognised PRP is one of the main causes of the imbalance. GTS wants to prevent recognised PRPs from having too much influence/impact on the SBS as an individual party (or as a group of parties) and therefore wants to limit the size of an individual imbalance.

4. At least one of the following circumstances:
 - a. A portfolio which is mainly balanced via the TTF is concerned. This is the case if at least one of the following circumstances arises:
 - i. The absolute value of the TTF near-real-time allocations in the portfolio is greater than the sum of all near-real-time entry and exit allocations in the portfolio (in absolute terms) at network points where the gas physically flows
 - ii. The portfolio has no near-real-time allocation at network points where the gas is physically fed into the network.
 - iii. The portfolio has no near-real-time allocation at network points where the gas is physically withdrawn from the network.

Explanatory notes:

This concerns TTF-oriented portfolios with limited physical size. This means that increasing the imbalance in the portfolio is a commercial activity that is carried out deliberately. The imbalance is not caused by a physical incident or physical "surprises" for the physical proportion is only small. The party should have carried out a TTF transaction which would reduce the imbalance.

- b. A portfolio whose imbalance is greater than its size at that particular hour is concerned. This is the case if the absolute value of the portfolio imbalance signal is greater than the sum of the TTF near-real-time allocations and all near-real-time entry and exit allocations in the portfolio (in absolute terms) at network points where the gas physically flows at that particular hour.

Explanatory notes:

The imbalance is far too big and has been built up with a small portfolio. When the allocations are added together they are smaller than the imbalance. How can the imbalance become so big with a small portfolio? The imbalance has probably become bigger over a period of several hours. The recognised PRP should have monitored more effectively and adjusted earlier.

The annex "Implementation Aspects" (annex 2) explains which types of network point contribute to physical entry, physical exit and the TTF respectively. This relates to near-real-time allocations.

Intervention as follows is proposed in the event of undesirable balancing behaviour:

1. If undesirable balancing behaviour occurs, GTS will levy a charge on the recognised PRP concerned. The first time, this charge will be 10% of the amount payable or receivable by the recognised PRP as a result of the balancing action.
2. The percentage rate will be increased by 10% each time for each subsequent repetition of the undesirable balancing behaviour (therefore from 10% to 20%, from 20% to 30%, etc., there is no maximum).
3. The charge is also levied for each subsequent balancing action in which the recognised PRP is

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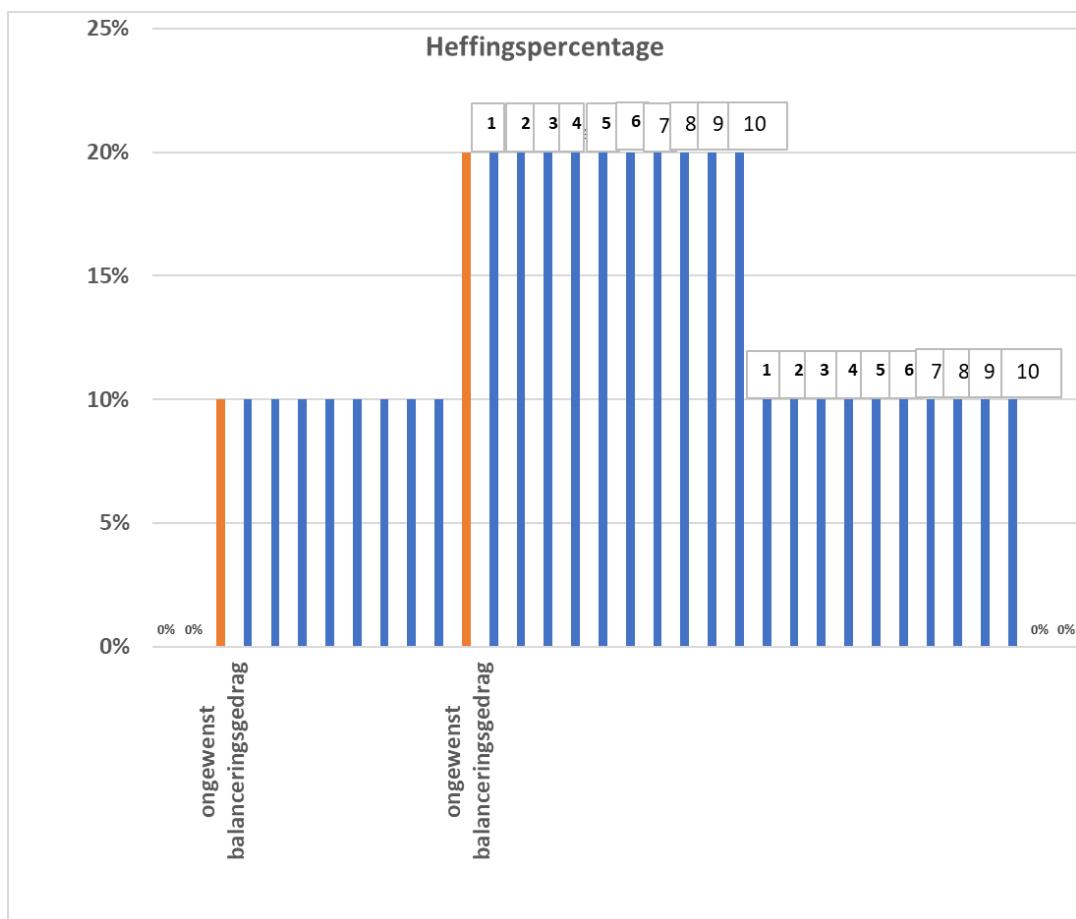
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involved as a causer.

4. The percentage rate will be reduced by 10% if the recognised PRP has not displayed any undesirable balancing behaviour for ten consecutive balancing actions (i.e. recognised PRP is a helper during a balancing action or recognised PRP is a co-causer of a balancing action but does not display any undesirable balancing behaviour). There will be no further reductions until the party concerned has refrained from undesirable behaviour for 10 new balancing actions.
5. The revenues from the charge will be set off in the transport tariffs via the neutrality charge (article 4.1.8 Transmission Code Gas TSO).

Example showing percentage rate trend

Each blue bar represents a balancing action, the orange bars show the times when the recognised PRP displays undesirable balancing behaviour. The recognised PRP does not display any undesirable balancing behaviour during any of the "blue" balancing actions.



Substantial undesirable balancing behaviour

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This proposal introduces the concept of substantial undesirable balancing behaviour by analogy with cases where credit limits are substantially exceeded (article B1.10 Transmission Code Gas TSO). If a recognised PRP displays substantial undesirable balancing behaviour then that PRP no longer meets the prudence requirements as set out in article 3.2.0. of the Transmission Code Gas TSO and GTS may withdraw its licence immediately.

Substantial undesirable balancing behaviour applies if the percentage rate exceeds a threshold value in terms of the level, duration or frequency.

Level: the percentage rate is at least 50%

Duration: the percentage rate is 10% or higher for more than six months

Frequency: a percentage rate of 10% has arisen at least three times during a period of six months.

This combination of measures creates an effective mechanism that ensures that substantial undesirable balancing behaviour will no longer occur.

Justification for the level of the percentage rate

GTS has analysed relevant exchange data for the period 3 September 2020 (start of variation of timing of balancing actions) to September 2021. The price spreads (difference between the minimum and maximum value of the offer) have narrowed, on average, compared to the situation before 3 September 2020.

In 40% of cases, the WDM transaction price was equal to the minimum price in a short scenario (GTS buys) or equal to the maximum price in a long scenario (GTS sells). The volume bought/sold by GTS is then bought/sold at the most favourable price. In such cases, any charge levied on a recognised PRP will ensure that there is no longer any financial incentive for the balancing behaviour described above. In 99% of cases, the WDM transaction price deviated less than 10% from the optimal price. If recognised PRPs might have intended to benefit financially, a 10% charge on the WDM transaction price will ensure that there is no longer any financial incentive.

At a rate of 20% on the WDM transaction price, there was only one case left with a possible financial incentive; at 30%, all financial incentive disappeared.

Although these results are no guarantee for the future, they do give a good indication that increasing the charge in increments of 10% will quickly reduce the possible financial benefit, particularly as long as the price spreads remain narrow.

Together with the concept of substantial undesirable balancing behaviour defined above and the ultimate potential for withdrawing a licence, it is expected that the proposed stage-by-stage increase in the percentage rate will provide an adequate solution to undesirable balancing behaviour. This proposal therefore contains these elements.

May a charge be applied according to BAL NC?

One of the within-day obligations permitted pursuant to BAL NC is implemented within the Dutch market-based balancing regime, i.e. a “system-wide within-day obligation”. This means that the provisions of article 25, paragraph 1 of BAL NC must be observed. That article reads as follows:

A system-wide within-day obligation is designed to provide incentives for network users to keep the transmission network within its operational limits and sets out the following:

a) the operational limits of the transmission network within which it has to remain;

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- b) the actions the network users can undertake to keep the transmission network within the operational limits;
- c) the consequential balancing actions of the transmission system operator when the operational limits of the transmission network are approached or reached;
- d) the attribution of costs and/or revenues to network users and/or consequences for the within-day position of these network users resulting from balancing actions undertaken by the transmission system operator;
- e) the related charges which are based on the individual within-day position of the network user.

Ad a

This is the dark green zone in the Dutch system.

Ad b

GTS provides information every five minutes. This gives the recognised PRP continuous insight into the imbalance in its portfolio and insight into the system balance. Adjustments can be made by buying or selling gas via the TTF (or TTFB), or by making adjustments at physical entry or exit points or at storage points.

Ad c

If the system balance signal (SBS) moves outside the dark green zone, GTS performs a balancing action and buys/sells sufficient gas to ensure that the SBS returns to the boundary of the dark green zone.

Ad d

The volume bought/sold is allocated to the recognised PRPs responsible for causing the balancing action according to their portfolio imbalance volumes. Amounts are paid/received according to volume (pro rata to the POS) * WDM transaction price. The portfolio imbalance of the recognised PRPs which, as causes, are involved in the balancing action, is adjusted by the volume allocated pro rata to the POS.

Ad e

The proposal introduces a charge for recognised PRPs displaying undesirable balancing behaviour. The charge is levied on the amount received/paid by the recognised PRP in the event of a balancing action. That amount (see 4.1.4.2 and 4.2.4.3 of the Transmission Code Gas TSO) is established on the basis of the individual within-day position of the recognised PRP.

Conclusion: The proposal is in line with article 25 paragraph 1 of BAL NC.

Examples

The examples below were previously illustrated and explained by GTS in the market sessions of 1 July and 21 September 2021.³

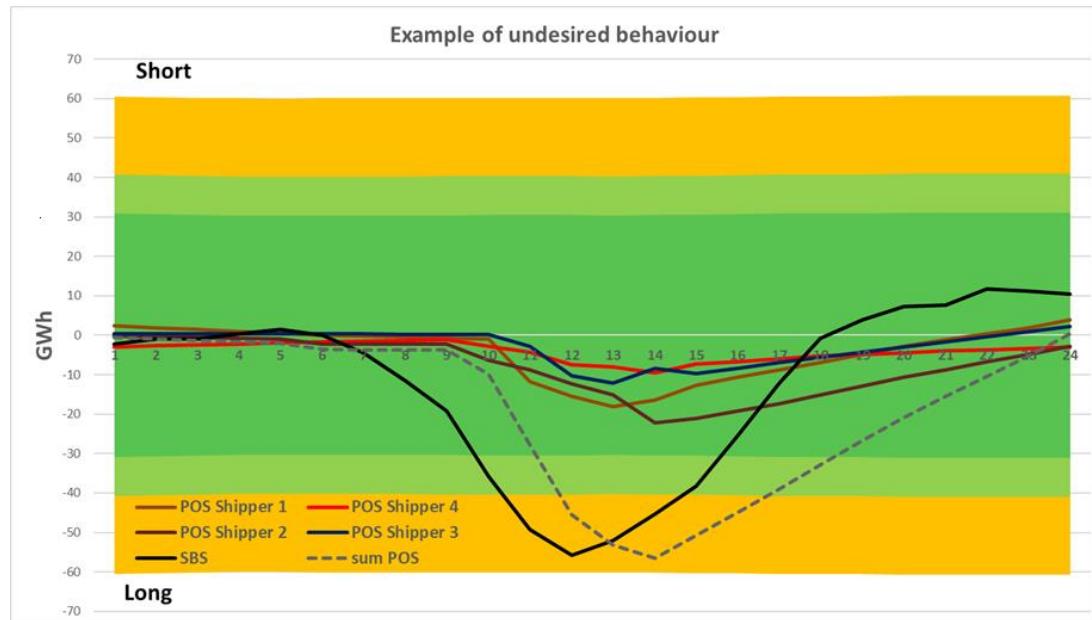
The first example shows a situation where the system goes long due to physical disruptions on the exit side. Recognised PRPs 1 to 4 react with undesirable balancing behaviour by using TTF transactions to

³ <https://www.gasunietransportservices.nl/en/nieuws/gts-marktsessie-over-het-nederlandse-balanceringssysteem>

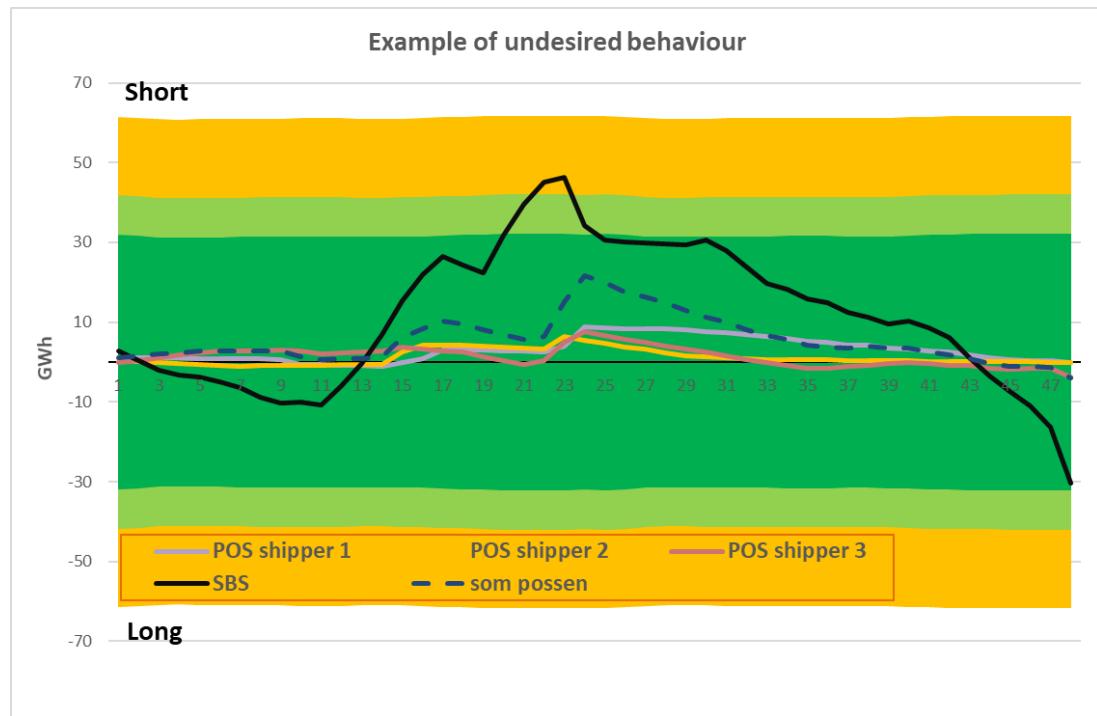
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set a chain reaction in motion that leads to other parties physically supplying (or physically withdrawing less gas) and thus further increasing the system imbalance.



The second example shows a situation where the system goes short due to physical disruptions on the entry side. Recognised PRPs 1 to 3 react with undesirable balancing behaviour by using TTF transactions to set a chain reaction in motion that leads to other parties physically withdrawing from the network (or physically feeding less in) which brings the system further out of balance.

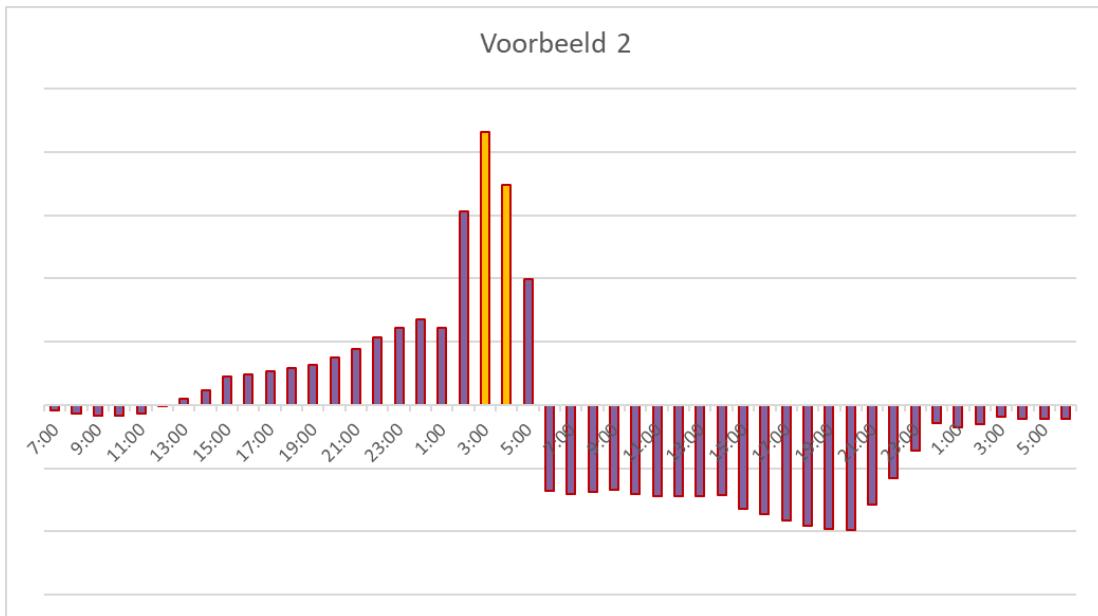
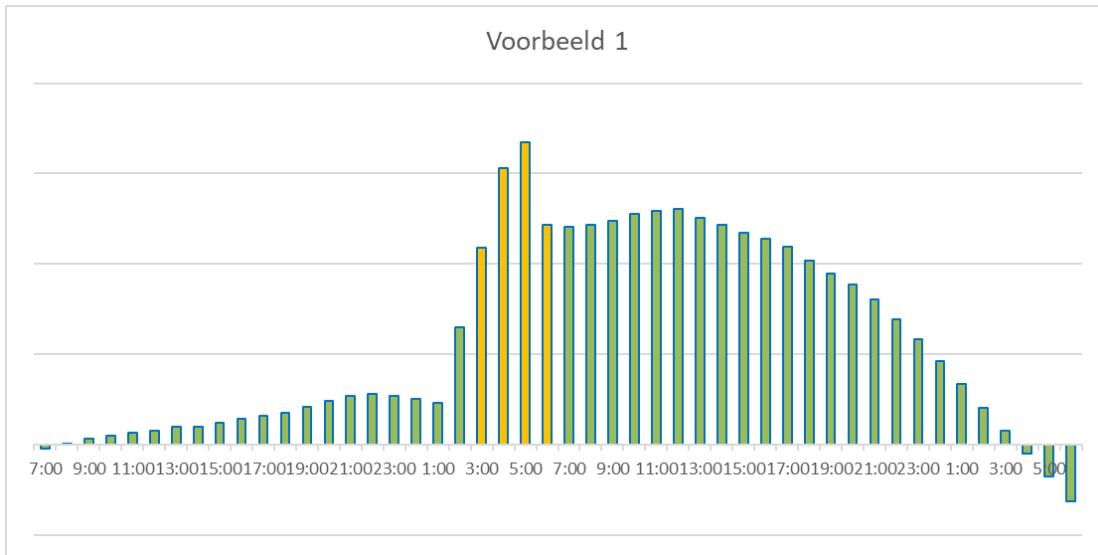


During the above example it is also interesting to show how two recognised PRPs, faced with the physical disruption, behaved. As stated above, undesirable balancing behaviour is generally not related to physical disruptions. However, the parties should monitor their imbalances continuously and act quickly and appropriately if the imbalance is suddenly affected by a physical disruption.

In the graphs below, the surge upwards in both POSs is caused by the physical disruption, the drop downwards by the subsequent balancing actions. The orange-coloured bars mark the hours when the recognised PRP displays undesirable balancing behaviour. The percentage rates can therefore rise quickly. In example 1, the recognised PRP is apparently not monitoring its portfolio 24/7 because the imbalance remains high even during the following hours. If a recognised PRP wishes to be treated leniently on account of a physical disruption, then a recognised PRP will in any case have to react quickly after the occurrence of such a disruption. This is not the case in example 1, for there was not yet any undesirable balancing behaviour after the first sharp increase as a result of the physical disruption. The recognised PRP could have made an adjustment in the next hour (i.e. the first hour in which undesirable balancing behaviour is displayed, the first orange bar) or as soon as possible after that, via, for example, the TTF, but completely neglected to do so. Leniency is not appropriate. In example 2 the recognised PRP is more "alert" and steers its portfolio more quickly towards a lower imbalance. Here too the recognised PRP could have acted more quickly by arranging for a counter-transaction immediately after the first increase. Example 2 may qualify for leniency, the decision depends on the specific circumstances.

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ACM investigated a specific incident on 16 and 17 July 2017. ACM came to the conclusion that there was insufficient evidence to establish beyond doubt an infringement of article 5 of the REMIT regulation and therefore decided not to impose a penalty on the energy trading company concerned.⁴ GTS also recognises this incident but as an example of undesirable balancing behaviour. GTS has also tested this incident against the proposed criteria. The outcome is that the behaviour displayed in this incident by the recognised PRP for several consecutive hours would qualify as undesirable balancing behaviour.

What else will change?

⁴ <https://www.acm.nl/sites/default/files/documents/besluit-dat-er-geen-boete-wordt-opgelegd-voor-mogelijke-overtreding-van-het-verbod-op-marktmanipulatie.pdf>

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Recognised PRPs that want to offer volume on the exchange must currently divide their available volume over two products (within-day, next-hour) while only one product will be called by GTS in the event of a balancing action.

Recognised PRPs that want to offer all their available volume can then do no more than stake everything on one product with the risk that they have made the wrong choice and will not sell any gas. This phenomenon can occur in particular when the SBS is situated near the border between the light green zone and the orange zone.

To ensure that gas will be traded, parties sometimes divide their available volume between both products.

By disclosing the product choice when the second announcement is made in respect of the balancing action (xx:15), offerors will know for sure which product will be used by GTS and can offer all their available physical volume on the exchange. GTS and market parties expect that this change will lead to more volume offered on the exchange and therefore to improved market mechanisms. It will not result in any radical change to the well-functioning balancing system. A code change for this improvement is not necessary. The change will be discussed with the market and laid down in a separate process via a change in the so-called Detailed Process Models (DPM, managed through NEDU's Wholesale Gas Issues Commission).

This proposal also provides for the correction of an inaccurate reference. The newly proposed article 4.1.4.7 refers to article 4.1.4.3, among other things. Article 4.1.4.3 refers to article 4.1.5.1. but this latter article no longer exists. The reference to the lapsed article has therefore been removed, as had already been done in article 4. 1. 4. 2.

Alternatives to the code change proposal (or parts thereof)

a) Higher LFS factor

GTS discussed and explained this option in the market session on 1 July 2021. Please see the examples explained earlier, which make it clear that recognised PRPs involved are steering their imbalance position towards zero at EOD. This means that increasing the LFS factor alone will not adequately prevent undesirable balancing behaviour. For the record: the LFS charge is equal to $0.4\% * \text{abs(POS)} * \text{NGP}$. Where the POS value is low, increasing the LFS factor (0.4%) will therefore hardly have any effect on the LFS fee nor will it provide any incentive to prevent undesirable balancing behaviour.

b) Introduce charges for all causes of a balancing action

Charging all causes of a balancing action will also affect recognised PRPs which do not display any undesirable balancing behaviour. In the current proposal GTS will only charge the parties displaying undesirable balancing behaviour. This is in accordance with the express request of the market parties.

c) Completely remove any financial incentive by using exchange spread

By eliminating the possible earnings model behind the undesirable balancing behaviour, the behaviour will disappear by itself. In order to make money, a recognised PRP will offer balancing gas anonymously on the exchange at a price much worse than the average price (higher when the system is short, lower when the system is long).

Energie-Nederland would like to see the following remedy investigated further by GTS:

GTS can identify which parties have displayed undesirable balancing behaviour during every balancing action. By ensuring these parties are routinely given the worst prices for gas offered on the exchange, their financial incentive will be zero.

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The remaining amount for the balancing action is then paid by the causers who did not display any undesirable balancing behaviour.

Whilst this option removes the financial incentive, it also has the consequence of requiring additional interaction with ICE and is therefore more complex than the currently proposed solution. The analysis above shows that the percentage rates quickly eliminate the financial incentive. Substantial undesirable balancing behaviour can also be identified without this additional information from ICE, in the manner set out in this proposal, and this behaviour can result in withdrawal of the licence. Both measures will ensure that undesirable balancing behaviour should be unlikely to occur again. That makes it unnecessary to use the additional ICE Endex information.

d) More liquidity by using two exchanges

This was suggested by the market. More liquidity generally means that a single party can exert less influence on the price/transaction price. More liquidity by using two exchanges does not seem necessary at the moment. There is currently sufficient (physical) supply on ICE Endex. The main aim of this proposal is to combat undesirable balancing behaviour. Following implementation of this code change proposal, GTS will of course continue to monitor the behaviour of recognised PRPs as well as trends in volumes offered (possibly in consultation with ACM and ICE Endex).

When this code change proposal is implemented, it is expected that the undesirable balancing behaviour will be a lot less frequent and therefore a lot less balancing actions will be required as a result of the SBS being in the orange zone. After all, for most calls in the orange zone the imbalance was not caused by physical disruptions but by undesirable balancing behaviour.

When the physical next-hour product is called upon, enough recognised PRPs remain to supply the volume requested by GTS via the ICE Endex exchange. In this respect, identifying the product in advance (see above) should also provide extra supply.

If these expectations do not materialise, the joint network operators will submit an additional code change proposal.

e) Alternative reasoning with respect to undesirable balancing behaviour (proposed article 4.1.4.7)

During GTS' market session on 21 September 2021, another POS rule in paragraph 4 was discussed: imbalance must increase: $POS(T) > POS(T-1)$ (in absolute terms).

Further analysis by GTS has shown that the rule does not make sufficient distinction. The POS rule now proposed in article 4.1.4.7, paragraph 4 (b) gives a better description of balancing behaviour that GTS considers undesirable (together with the other circumstances mentioned in article 4.1.4.7).

Consequences of the proposal for connected parties and any other parties involved

The proposal only has consequences for recognised PRPs displaying undesirable balancing behaviour. If physical failure takes place this may be grounds for leniency, unless the recognised PRP maintains its imbalance or brings it back very slowly to a level below 15%. In short, the basis for 24/7 monitoring and adjusting must be in good order.

The proposal has no consequences for directly connected parties with an LL licence. This is because they have transferred their programme responsibility (and therefore, in fact, their balancing responsibility) to a recognised PRP.

Coherence with other code change files

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There is no substantive coherence with other code change files.

Verification against article 12f of the Dutch Gas Act

This proposal meets the requirements of article 12f of the Dutch Gas Act because the proposal contributes to promoting the efficient operations of network users (art. 12f paragraph 1 (d)) and to keeping the national grid in balance in an objective, transparent and non-discriminatory manner and in a way that reflects the costs (art. 12f paragraph 1 (f)).

Procedure followed

Market sessions were organised by GTS on 1 July and 21 September 2021, during which the problem was explained and possible solutions discussed. The market parties also made suggestions. The received input has led to this proposal. The code change proposal was adopted on 25 November 2021 by Netbeheer Nederland's Task Force on Regulation (Taakgroep Regulering van Netbeheer Nederland) as a proposal of the joint network operators as referred to in article 12f of the Dutch Gas Act.

Consultation with the representative organisations of parties on the gas market, as referred to in article 12d of the Dutch Gas Act, took place at a meeting of the Electricity and Gas Networks Users' Platform (Gebruikersplatform elektriciteits- en gasnetten) (GEN), held on 16 December 2021. The section of the report of this meeting relating to this proposal is attached as annex 3 to this letter.

The proposal has been [not been] amended in response to the discussion held by GEN.

Decision-making and entry into force

Given the contents of the proposal, no specific date of entry into force is required. It is however important for recognised programme-responsible parties and the network operator of the national grid to have sufficient time to adapt their operational procedures and IT systems to the proposed change. A suitable period between adoption of the decision by the ACM and the date of its entry into force is therefore to be recommended. GTS will inform ACM what is feasible for GTS in the period that a possible draft decision is under discussion.

Some time after implementation of the changes arising from the decision, GTS will carry out an evaluation including an analysis of the effectiveness of the measures.

We would, of course, be happy to explain the proposal in more detail, if required. Please contact Ms Saskia Fikkers at Gasunie Transport Services B.V. (s.m.n.fikkers@gastransport.nl) or Mr Auke Jongbloed at our office (see letterhead for details).

Yours sincerely

Dick Weiffenbach
Director

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Annex 1

Article 4.1.4.7

1)

Recognised PRPs may not display any undesirable balancing behaviour. There is undesirable balancing behaviour if when, at any hour:

- a) the system balance signal is outside the dark green zone;
- b) the portfolio imbalance signal of a recognised programme-responsible party has the same direction as the system balance signal; i.e., both signals indicate a shortage or both signals indicate a surplus;
- c) the absolute value of the portfolio imbalance signal of the portfolio concerned is greater than 15% of the limit of the dark green zone; and
- d) at least one of the following circumstances apply:
 - a. the portfolio concerned is mainly balanced via the TTF. This is the case if:
 - i. the absolute value of the TTF near-real-time allocations in the portfolio is greater than the sum of all near-real-time entry and exit allocations in the portfolio (in absolute terms) at network points where the gas physically flows;
 - ii. The portfolio has no near-real-time allocation at network points where the gas is physically fed into the network; or
 - iii. The portfolio has no near-real-time allocation at network points where the gas is physically withdrawn from the network.

or

- b. the portfolio imbalance of the portfolio concerned is greater than its size at that particular hour. This is the case if the absolute value of the portfolio imbalance signal is greater than the sum of the TTF near-real-time allocations and all near-real-time entry and exit allocations in the portfolio (in absolute terms) at network points where the gas physically flows at that particular hour.

2)

If a recognised programme-responsible party displays undesirable balancing behaviour in accordance with the first paragraph, the network operator of the national grid increases the percentage rate applicable to the recognised programme-responsible party concerned by 10%, or sets it at 10% if no percentage rate yet applies to the recognised programme-responsible party concerned.

3)

If a recognised programme-responsible party has not displayed any undesirable balancing behaviour in accordance with the first paragraph for ten consecutive balancing actions, the percentage rate applicable to the recognised programme-responsible party concerned will be reduced by 10% thereafter to a minimum of 0%. Each subsequent 10% reduction of the percentage rate requires a further ten consecutive balancing actions in which the recognised programme-responsible party has not displayed any undesirable balancing behaviour.

4)

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If the percentage rate for a recognised programme-responsible party is not equal to zero, a charge equal to the percentage rate multiplied by the absolute value of the amount derived from articles 4.1.4.2 or 4.1.4.3 is levied for each balancing action in which the recognised programme-responsible party is involved according to 4.1.4.2 or 4.1.4.3.

5)

The charges will be invoiced in a transparent manner by the network operator of the national grid.

4.1.4.8

1)

If at any time the recognised programme-responsible party displays substantial undesirable balancing behaviour, then the programme-responsible party no longer meets the condition referred to in article 3.2.0, part c of the Transmission Code Gas TSO and withdrawal of its licence pursuant to article 3.3.2 may follow immediately.

2)

A recognised programme-responsible party displays substantial undesirable balancing behaviour as referred to in the first paragraph if:

- a. the percentage rate applicable to the recognised programme-responsible party concerned is at least 50%, or;
- b. the percentage rate applicable to the recognised programme-responsible party concerned has been at least 10% for more than six months and there have been enough balancing actions in that period to reduce the percentage rate by the maximum amount, or;
- c. the percentage rate applicable to the recognised programme-responsible party concerned has become 10% at least three times in a six-month period after having been 0%..

3)

If the network operator of the national grid proceeds to withdrawal of the licence it will, prior to doing so, inform all recognised programme-responsible parties, all suppliers and the ACM as soon as possible.

Article 4.1.8

1. Every calendar year, the network operator of the national grid will charge network users, as defined in article 2, paragraph 5 of BAL NC, a neutrality charge in accordance with chapter VII of BAL NC.
2. The neutrality charge is made up of the sum of:
 - a. the balance calculated as specified in article 4.1.4.5, paragraph 3
 - b. the balance calculated as specified in article 4.1.4.6, paragraph 4
 - c. revenues from the end-of-day settlement as specified in article 4.1.7

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- d. losses incurred due to non-payment as specified in article 31 of BAL NC van de NC-BAL corrected after any subsequent revenues.
- e. **Revenues from the charge as defined in article 4.1.4.7.**
- 3. The neutrality charge for calendar year t is, in principle, charged to network users in calendar year $t+2$, using the same methodology as the capacity-based entry and exit tariffs, as specified in Articles 3.2.1.1 to 3.2.3.10 inclusive of the Tariff Code Gas TSO, whereby the allowed revenues (TI) used in Articles 3.2.2.2 and 3.2.2.4 of the Tariff Code Gas TSO are replaced with the amount of the neutrality charge.
- 4. The invoice issued by the network operator of the national grid for the neutrality charge will specify the elements listed in the second paragraph and the capacity contracted
- 5. Before invoicing a network user for the neutrality charge, the network operator of the national grid will submit the intended charge and the specification specified in the fourth paragraph to the ACM for information purposes.

4.1.4.3 Actions relating to balance maintenance in a surplus situation

The quantity of gas that the network operator of the national grid sells pursuant to 4.1.4.1 is bought by the network operator of the national grid in the hour of delivery or offtake at the WDM transaction price ~~referred to in 4.1.5.4~~ from the causer in proportion to the value of its portfolio imbalance signal relating to the start of the hour of the WDM transaction. This affects the portfolio imbalance signal in the hour of delivery or offtake of this gas.

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Annex Implementation Aspects

An overview of the physical network points is set out below:

Input near real-time allocaties	Entry	Exit
Entry Production	✓	
Exit Production		✓
Entry Export-import	✓	
Exit Export-import		✓
Entry Storage	✓	
Exit Storage		✓
Entry RNB	✓	
Exit RNB		✓
Entry PNB	✓	
Exit PNB		✓
Exit Industry		✓

Allocation of a number of particular points is set out below:

Input near real-time allocaties	Fysieke Entry	Fysieke Exit	TTF	Out of scope
Balancing causer (gas na balancing action)				✓
TTF-B supply			✓	
TTF-B receiving			✓	
Virtual feeding LDC (fysieke invoeding vanuit RNB)	✓			
Peak supply	✓			
TTF			✓	
Entry Bacton via Trading Zone	✓			
Exit Bacton via Trading Zone		✓		

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[Date]

[Insert report]