



TARGET BALANCING SYSTEM
PROPOSED CHANGES TO THE BALANCING RULES
ON THE GAS TRANSMISSION SYSTEM

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1. BACKGROUND

1.1. European regulatory context

Regulation (EC) No. 715-2009 of the European Parliament and European Council of July 13, 2009 on the conditions of access to the natural gas transmission system sets out a process for drawing up Network Codes, in order to harmonise access and the operating rules on the Member States' natural gas networks in a number of issues defined in Article 8 of that regulation.

The issue of balancing rules was one of the priorities included by the European Commission for the establishment of a Network Code by 2012.

At the invitation of the European Commission, ACER drafted framework guidelines for the balancing rules, in accordance with the provisions laid down in Articles 6 and 8 of EC regulation No. 715-2009. These framework guidelines were submitted for public consultation from April 12 to June 12, 2011. Once the European Commission has approved the framework guidelines, it will invite the European Network of Transmission System Operators for gas (ENTSO-G) to submit a Network Code to ACER reflecting the framework guidelines, within a reasonable timeframe not exceeding 12 months. A process of consultation and approval will follow, after which, if the code is adopted, it will have legal force and will need to be implemented by all TSOs in the member countries.

As regards balancing rules and fees, **Article 21 of EC regulation No. 715-2009** lays down the following principles, amongst others:

- The balancing rules must be equitable, non-discriminatory and transparent and based on objective criteria. The balancing rules must reflect the genuine system needs, within the limits of the resources available to the transmission system operator. These balancing rules are market-based.
- ... the transmission system operator must provide, by electronic means, sufficient, timely and reliable information on the balancing status of system users... There should be no charge for providing the information referred to in this paragraph.
- The information provided will depend on the level of information available to the transmission system operator.
- Balancing fees should as far as possible reflect costs, but should provide sufficient incentives for system users to balance their gas injections and off-takes.

1.2. Rulings of the Energy Regulatory Commission on changes to the balancing system.

In its **ruling of September 30, 2010 on changes to the balancing rules on the gas transmission systems**, CRE approved the principles of the target balancing system proposed by GRTgaz, on which consultations were held in the summer of 2010.

In this proposal, GRTgaz opted for balancing principles primarily based on market mechanisms. In order to give shippers incentives to maintain daily balancing and to guarantee existing gas flows, mid-range values and cumulative imbalance accounts will be eliminated. In addition, to help shippers with balancing and contribute

to the balance of the system, GRTgaz proposes to increase the level of information provided to shippers on the status of the transmission system as a whole and with regard to each specific shipper's portfolio.

In this same ruling, CRE asks GRTgaz to continue working within the "Concertation Gaz" consultation process, with the aim of providing it by June 30, 2011 with a roadmap for the implementation of a target balancing system that is in line with European guidelines. This roadmap will need to define the transitional stages with regard to:

- The balancing rules applicable to shippers;
- The information provided by GRTgaz to enable shippers to minimise their imbalances;
- The procedures for GRTgaz to intervene on the market with a view to covering its balancing needs.

Finally, in its **ruling of March 17, 2011 on changes to the balancing rules on the gas transmission system as of May 1, 2011 (in particular the reduction in mid-range levels)**, CRE defines and adds the following elements:

In accordance with the ruling of September 30, 2010, GRTgaz must continue its work within the Concertation Gaz process so that, by June 30, 2011, it can provide CRE with a roadmap for the implementation of this target system by 2013.

CRE asks GRTgaz to continue its ongoing work within the Concertation Gaz process to implement the following changes as soon as possible:

- The opening of a new *Within Day* intervention window on the Powernext Gas Spot exchange;
- Optimisation of GRTgaz's *Within Day* intervention strategy on the Powernext Gas Spot exchange;
- Introduction of a *Within Day* framework reference for the P1 balancing price in *Within Day* sessions.

2. PURPOSE

This document is GRTgaz's proposal for a target balancing system and a roadmap for its implementation by 2013 and 2014, in response to CRE's request as formulated in its rulings of September 30, 2010 and March 17, 2011.

The principles put forward are in line with the European framework guidelines as they currently stand in their provisional version. They were discussed with the market players at meetings of the Concertation Gaz's Balancing working group held on May 6 and 27 and June 21, 2011. Finally, they reflect the specificity of the French gas market and the physical constraints of GRTgaz's transmission system.

Given current progress in developing the Network Code on balancing at European level, certain aspects of the proposal will have to remain as principles and others may require adapting in line with changes to the corresponding European documents.

3. RECAP OF THE CURRENT BALANCING SYSTEM

3.1. Principles

GRTgaz's current balancing system is governed by the following principles:

- Shippers on GRTgaz's transmission system are balanced on a daily basis.
- Shippers have a daily and cumulative imbalance tolerance based on their delivery capacity portfolio.

- Shippers' daily imbalances are handled in different ways:
 - Below the daily tolerance, part of the imbalance is handled in kind and can be accumulated in a Cumulative Imbalance Account (EBC). This is the proportion of the imbalance that is below the mid-range. Any proportion of the imbalance between the mid-range and the tolerance is cashed out by buying/selling at a market price, called P1.
 - Beyond the daily tolerance, the daily imbalance is cashed out by buying/selling at a market price, subject to penalties, called P2.
- The cumulative imbalance account allows 5 days of imbalance in the same flow direction to be accumulated up to the mid-range. Beyond this, the permitted cumulative imbalance surplus or deficit is subject to a penalty price P3, and this surplus or deficit is not cashed out by buying or selling.
- The system's balancing needs are covered by GRTgaz through different tools, essentially by drawing on storage services and by buying/selling gas.
- The price applied to shippers' imbalances reflects the costs borne by GRTgaz in balancing its transmission system by buying/selling gas. This price is calculated on the basis of GRTgaz's day-to-day market transactions on the "Powernext Gas Spot" exchange.
- The balancing system is financially neutral for GRTgaz. Both imbalance cash-outs and purchases/sales of gas on the market are financially neutral. The balancing rules therefore include a mechanism for returning surpluses or passing on losses to shippers.

3.2. Reference price for imbalance cash-outs

The balancing rules on GRTgaz's transmission system have gradually evolved towards a mechanism based on market principles.

From September 2007 to November 2009, the prices arising from trading on the Balancing GRTgaz platform (the so-called "P1" market price) were used as the billing basis for part of shippers' imbalances above the mid-range. Since December 1, 2009, P1 market prices have been set through GRTgaz's interventions on the Powernext Gas Spot exchange.

For a given day D, for the South or North Balancing Zone, the Daily Reference Price P1 is the average price of the transactions carried out by GRTgaz on the Powernext Gas Spot exchange, weighted by the maximum transaction volumes, within the framework of its activity in buying or selling gas in order to cover part of the daily physical balancing needs of the transmission system.

For a given Day D, for the North Balancing Zone and L-gas quality, the daily reference price P1 is the Daily Reference Price P1 in the North Balancing Zone and H-gas quality plus €0.16 per MWh.

3.3. GRTgaz's market intervention strategy

The strategy for buying/selling on the Exchange has been agreed with the market players. It is executed by a computer algorithm. Each operation within the trading window is designed to ensure that the algorithm always selects the best prices.

At present, GRTgaz operates within two trading windows.

- one on the Day-Ahead product (for delivery on the next working day) or Week-End product (for delivery on the week-end of 2 days or more), and
- the other on a Within-Day product (for delivery the same day).

GRTgaz intervenes on every day that the Powernext Gas Spot exchange is open.

- Between 3:45 p.m. and 4 p.m. for the Within-Day (WD) product;
- Between 4:30 p.m. and 4:45 p.m. for Day-Ahead (DA) and Week-End (WE) products.

Within these trading windows, GRTgaz’s buy or sell orders will take place at arbitrary times. GRTgaz intervenes several times in each trading window to cover its balancing gas needs.

The quantity of gas that GRTgaz can buy or sell is capped at a maximum transaction volume per balancing zone and per delivery time.

Since May 1, 2011, the volumes have been as follows:

Balancing zone	Trading volume during sessions:	
	Day-Ahead and Week-End Session	Within-Day Session(s)
North Zone	from 0 to 2,000 MWh/d	from 0 to 5,750 MWh/d
South Zone	from 0 to 1,500 MWh/d	from 0 to 4,000 MWh/d

4. RECAP OF THE ASSESSMENT OF THE CURRENT SYSTEM

The assessment of the current balancing system is very similar to the one already set out by GRTgaz in its “Proposed changes to the balancing system on GRTgaz’s transmission system” of July 5, 2010, annexed to the CRE ruling of September 30, 2010. Although the current balancing rules have moved things forward and prepared all the market players for market-based balancing, that assessment highlighted the following limitations:

- A tolerant system that does not give shippers sufficient incentive to balance their positions and that therefore does not exploit all possible sources of flexibility;
- A system for managing imbalances on the physical system that is complicated by the existence of cumulative imbalance accounts, since market interventions do not necessarily materialise in physical gas flows;
- Limited information supplied by GRTgaz to the market on the balancing status of the transmission system or on shipper balancing over the day;
- A hybrid balancing system that is market-based, but only partially reflects the cost of balancing, since only part of the imbalances are dealt with at a market price, whilst the rest depends on the flexibility contract between GRTgaz and Storengy.

Moreover, with an extra year of feedback, we also consider that the current system, with fixed buying/selling interventions by GRTgaz, has the disadvantage that the volume of our interventions cannot be properly adjusted to the forecast or existing imbalance in the course of the day.

5. TARGET BALANCING SYSTEM AND ROADMAP PROPOSED BY GRTgaz

5.1. Objectives

The target balancing system is market-based. This system, to be introduced in three years, is based on the following major changes:

- the wish to increase market player involvement in balancing the system;
- consequently, removing mid-ranges and cumulative imbalance accounts in order to create the necessary incentives for market players;
- improving the quality and quantity of the information GRTgaz gives shippers, both with regard to individual shippers and to the status of the system as a whole, which will allow GRTgaz to rely on the shippers to balance its transmission system;
- finally, if the information provided does not satisfactorily balance the system, real-time market transactions by GRTgaz as close as possible to the forecast or actual physical stress on the system, with the aim of reducing that stress as far as possible.

This target balancing system will therefore leave GRTgaz with a purely residual balancing role, with most of the balancing being done by shippers, using the information provided by the TSO (each shipper's position, system stress, etc.).

This means that the day-before and within day information provided by GRTgaz will enable shippers to adapt their re-nominations to their own expected imbalance and to the overall imbalance on the system.

As regards GRTgaz's interventions on the Exchange, these will provide the necessary price signal and meet all or part of the anticipated imbalance.

To sum up, in order to achieve this target system and given the possible timeframes of changes to the information systems, GRTgaz plans to move forward in three stages:

- **First, to provide the market players with system information and stimulate the within-day market by adding a new window as a transitional measure.**
- **Next, when the information systems permit it, to provide more individual shipper information, so that individual shippers can act as appropriate to their own portfolio.**
- **Finally, once this within day information is provided, to introduce the target system, removing imbalance mid-ranges, revising tolerances, and allowing GRTgaz to intervene in the market when required by system stress. This will make it possible to apply an imbalance cash-out price that reflects system stress.**

Sections 5.2, 5.3, 5.4 and 5.5 give a more detailed description of the different steps leading to the target system identified in the CRE ruling of September 30, 2010.

5.2. Market interventions by GRTgaz and provision of system information

5.2.1. Target situation

GRTgaz plans to gradually introduce a price-volume strategy with the aim of giving the market a real-time signal reflecting system stress, which will firstly encourage shippers to balance their positions, and secondly to buy or sell part of the total imbalance. This strategy is based on the following principles:

- GRTgaz can intervene at any time, rather than within preset windows as it does at present. To achieve this, the Exchange opening hours will need to be extended, so that trading can continue in the evening, at weekends and on public holidays, and possibly at night.

- Whenever it intervenes, GRTgaz will always trade at the best price limit order.
- When it intervenes, GRTgaz will trade until it achieves the price that reflects stress on the system (connected with the **Forecast end-of-gas-day balance indicator** described below), which will encourage shippers to balance their positions.

5.2.2. Steps leading up to the target system

GRTgaz proposes to move gradually towards the target system by setting itself objectives at two intermediate stages, the first at the beginning of 2012 and the second at the end of 2012. The table below sets out the different parameters and changes proposed at each stage. Obviously, these proposals will be discussed with the market under the Concertation Gaz process, so that the details can be ironed out.

Current situation	<ul style="list-style-type: none"> - Up to two interventions on any gas day: one Day Ahead and the other Within Day. - Maximum intervention volumes (currently set by the ruling of March 17, 2011) - Best limit order strategy (introduced since May 25, 2011 and presented at the consultations of January 25 and February 10, 2011, as requested by CRE on March 17, 2011)
Situation at the start of 2012	<ul style="list-style-type: none"> - Opportunity study for a new morning Within Day session by the end of 2011 and, if confirmed, opening of a new session at the beginning of 2012 - Publication of a semi-quantitative system stress indicator called “Forecast end-of-gas-day system balance indicator”, as described below - Intervention volumes reflecting the indicator and the associated colour code (also described in Section 5.2.4)
Situation at end 2012	<ul style="list-style-type: none"> - The “Forecast end-of-gas-day system balance indicator” becomes quantitative - Emphasis on Within-Day interventions - Study on extending exchange opening hours into the evening - Intervention volumes proportional to and reflecting the indicator, with maximum intervention levels - Possible reduction in mid-ranges (subject developed in paragraph 5.2) -
Target situation	<ul style="list-style-type: none"> - Interventions possible at any time - Extension of possible intervention times (weekends and holidays, possibly at night) - Strategy of pursuing a price in GRTgaz’s trading operations that reflects system stress - In parallel, elimination of Cumulative Imbalance Accounts, together with Allocation Imbalance Accounts

5.2.3. Introduction of the “Forecast end-of-gas-day system balance indicator”

In order to achieve the desired target balancing system, GRTgaz will provide information for the market that shippers can use to get the best possible idea of the balancing status of the transmission system as a whole.

To achieve this, for the whole system and for each balancing zone, GRTgaz will produce a new system stress indicator, called the **Forecast end-of-gas-day system balance indicator**. It gives the forecast for the difference, at the end of the gas day, between the physical entries of gas planned by shippers (based on their nominations) and GRTgaz’s consumption forecasts, excluding GRTgaz’s own needs.

This indicator, initially semi-quantitative for each balancing zone, will be introduced by the beginning of 2012. It will be published for the market with thresholds that can be set for each period (seasons...) and communicated to the market, to give a forecast for the situation of the transmission system at the end of the gas day, with the following 5 criteria:

- System balanced
- Systems stressed long/short
- Systems stressed very long/very short



This indicator will be published and updated hourly from 4 pm the day before and up to 4 am at the end of the gas day.

By the end of 2012, it will become quantitative, i.e. the forecast end-of-day balance will be given as energy figures.

5.2.4. Intervention volumes

Under existing balancing rules, the quantity of gas that GRTgaz can buy or sell is capped at a maximum intervention volume per balancing zone and per delivery period.

With the introduction of the above-mentioned indicator, GRTgaz is opening up the possibility of doubling the maximum trading volume in a session for a given balancing zone when system stress is high (colour code red). In addition, when the indicator is balanced, GRTgaz can stop intervening.

At the end of 2012, when this indicator will become quantitative, GRTgaz plans to intervene on volumes that directly reflect the forecast level of imbalance.

These proposals are summarised in the table below:

	Day Ahead (DA) Session	Within-Day Session(s) (WD)
Current situation	Maximum intervention volumes	Maximum intervention volumes
By start of 2012	Maximum intervention volumes 	Maximum intervention volumes New WD1 window if useful Q1 WD1 and Q1 WD2 to be defined

End 2012	Explore extended evening trading times Optional window with volume reflecting indicator	Q1 WD1 and Q1 WD2 directly reflecting indicator
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5.3. Provision of information to shippers

5.3.1. Information on industrial customers connected to the transmission system (representing 1/3 of total consumption)

Currently, GRTgaz provides shippers who have a portfolio of industrial customers connected to the transmission system with information on their customers' hourly consumption, five times a day.

Under the target system, by the second half of 2013, GRTgaz plans to provide information on the hourly consumption delivered to each industrial customer on an hourly timeframe.

5.3.2. Information on distribution customers (representing 2/3 of total consumption)

5.3.2.1. Basic principles proposed

At present, GRTgaz does not give shippers information on their customers connected to the distribution systems. Indeed, at present there is no same-day information from distribution system operators which would make it possible to provide this kind of data.

In the absence of same-day information provided to shippers, the framework guidelines currently being approved require the TSOs to provide shippers with consumption estimates the day before the gas day, for customers who do not have daily remote metering, with updates at least twice a day.

GRTgaz's proposals are based on the following fundamental objectives: to ensure that the information available to the system is used as effectively as possible and to give the different players the strongest possible incentive to contribute to the overall balance of the system. At the three consultation meetings in May and June 2011, different solutions were examined. GRTgaz proposes to adopt at least the following provisions:

- GRTgaz will calculate and publish overall consumption forecasts at PITDs for each balancing zone.
- GRTgaz will prepare and make available to each shipper the consumption estimates for each profiled customer, and for each balancing zone, the day before the gas day;
- GRTgaz will update these estimates twice during the gas day, on the basis of the different portfolios and weather report updates.

GRTgaz believes that additional work is needed and that the discussions will have to continue on this subject under the Concertation Gaz process, taking account of the European framework guidelines and the provisions laid down in the Balancing Network Code.

5.3.2.2. Method of estimating consumption by profiled customers

The consumption by profiled customers for each balancing zone and shipper, mentioned in the basic principles, would be estimated by GRTgaz using the information on customer portfolios provided by the DSOs, on the basis of the profiling method of estimation used by the DSOs to determine the consumption by

customers without remote metering (profiled customer), and on the basis of the rules defined in the Gas Working Group (GTG) consultation body.

For this to happen, the DSOs will have to provide GRTgaz on a daily basis with the aggregate composition of the portfolios of shippers' customers on the distribution system, at the level of each PITD. The characteristics and constraints of the DSOs' information systems mean that this composition must reflect the portfolios for the day before the information is provided. These portfolios are then reallocated to shippers on the transmission system on the basis of the joint declaration that gives the correspondence for each PITD between distribution contracts (CAD) and transmission contracts (CAT).

At the Consultation meetings of May 6 and 27, and June 21, the possibility was raised of GRTgaz publishing a coefficient k_0 for each Balancing Zone (or, equivalently, adjusted consumption forecasts of profiled customers for each shipper) similar to the k_1 and k_2 coefficients used in the allocation process, so that the consumption forecasts per shipper can be reconciled with GRTgaz's overall forecasts, for each balancing zone, using the following formula:

$$\text{Overall forecast GRTgaz} = \sum_{\text{EXP}} \text{Estimates_Non-profiled} + k_0 \times \sum_{\text{EXP}} \text{Estimates_Profiled}.$$

The quality of k_0 as a coefficient depends on GRTgaz's overall consumption forecasts for each balancing zone at PITDs and on the overall forecasts of consumption by non-profiled distribution customers for each balancing zone. While it is clear that GRTgaz is best placed to make the overall forecasts for each balancing zone, two alternatives were suggested for making the best forecasts of consumption by non-profiled distribution customers:

1. Either shippers themselves forecast consumption by their non-profiled customers and specifically nominate the corresponding quantities per balancing zone. In this case, k_0 is calculated by totalling the most recent nominations sent by the shippers before the calculation.
2. Or GRTgaz makes a forecast of total consumption by non-profiled customers, at the level of each balancing zone.

The first solution has the advantage of taking into account the best available sources of data, since the information the shippers have on their non-profiled customers is as good as or better than that held by the system operators. It also encourages shippers to make optimum use of the available information, to the overall benefit of the whole system. In return, it requires the nominations on the delivery pools to be broken down between transmission customers, non-profiled distribution customers and profiled distribution customers, which implies that shippers need to have the best possible forecast breakdowns to ensure a reliable k coefficient.

Another possibility raised in the consultation process was the potential use of within-day metering information from the DSOs, for a limited part of the gas day. This information would be a plus for shippers. The potential quality of this information, speed of implementation and costs for the DSOs, if this option were to be chosen in the future, remain to be assessed.

The second solution undoubtedly produces a beneficial pooling effect, as a result of aggregate forecasting but the quality of this forecast remains uncertain. It has the advantage of maintaining a simple nomination system, but rules out any benefits from specific information available to shippers on consumption by their non-profiled customers, and therefore does not help to optimise the value of the coefficient k_0 . GRTgaz has still to assess this solution. During the consultations in November and December 2010, GRTgaz also proposed to calculate and publish a forecast of k , using historic data. However, the shippers felt that this solution did not give them any more information than their own method of calculating k .

As a result, and also in anticipation of possible changes to the provisions in the soon-to-be published framework guidelines, **GRTgaz gives priority to solution 1. If this solution is implemented, GRTgaz could then undertake to publish the coefficient k_0 , based on the total of the nominations sent by shippers.** In any case, GRTgaz proposes to continue in-house work and discussions under the Concertation Gaz process, in order to find the best possible solution to maximise information for the market.

5.4. Imbalance cash-outs

5.4.1. Specific case of profiled distribution system customers

At the consultation meetings, GRTgaz proposed different solutions, in particular on allocation for profiled customer balancing. Currently, the allocation for these customers is calculated by adjusting the profiled quantities by the coefficient k_2 . An alternative that has been put forward is instead to calculate the imbalance from the latest information sent by GRTgaz during the day, i.e. the consumption forecast for that portfolio for each shipper.

For its part, the framework guidelines require a forecast for that portfolio updated at least twice a day, but does not require that the imbalance should be calculated using that forecast.

As things stand, GRTgaz proposes that the imbalance calculation should remain unchanged.

5.4.2. Nominations and allocation for balancing

The proposed nomination and allocation rules are summed up in the table below.

The difference from the current situation lies in the possibility of asking shippers to nominate separately for their portfolio, i.e.:

- Option 1: for each balancing zone, a shipper nominates per customer category, i.e. three values for its customer portfolio: one for consumer delivery points (PLC), one for DD/PITD customers (non-profiled customers with remote metering, also called daily metered customers) and one for profiled customers. Option one is useful if the decision is made to calculate a coefficient k_0 based on information available to shippers.
- Option 2: shippers nominate a single value, as they currently do, for their whole portfolio on the balancing zone.

Options 1 and 2 only affect the nomination process: for the moment, the allocations proposed are the same as at present, whichever option is chosen, **i.e. the imbalance is pooled whatever the category of customer.**

Point	Description	Nomination	Allocation for balancing
Entries	Physical entries into the Zone at the PIR, PITS, PITTM, PITP, Links	Nomination by the shipper	= confirmation
Exits	Gas physically leaving the zone at the PIR for delivery (excluding PIRR), PITS exit, Link	Nomination by the shipper	= confirmation
PIRR	Gas physically leaving the zone at the PIRR	Nomination by the shipper	= allocations M+1
PEG	Net quantity traded by the shipper at the PEG	Nomination by the shipper	= confirmation
Delivery Pool (PL)	Quantities delivered to all the shipper's consumer customers in the zone: PLC + DD/PITD + Profiled/PITD	To be decided: - Option 1: nomination done by separate aggregation of nominations at the PLC, DD/PITD and Profiled/PITD or - Option 2: pooled nomination by the shipper	= allocations M+1 (with k2 reconciliation process for profiled customers)

5.4.3. Proposed imbalance cash-out

5.4.3.1. Imbalance cash-out principles

Imbalances are handled at a marginal price (see paragraph 0), with the possibility of maintaining tolerances (See paragraph 5.4.3.4) on shippers' portfolios, below which the imbalance would be cashed out at an average market price.

Cumulative imbalance differences are eliminated. So it is no longer possible to accumulate a proportion of daily imbalances.

5.4.3.2. Setting the marginal price

The marginal price will be set on the basis of the definitions in the framework guidelines and Network Codes, and the process can be described as follows:

When GRTgaz does not intervene on the market:

Marginal selling price = Average price – discount (downside adjustment)

Marginal buying price = Average price + premium (upside adjustment) Where the Average price = weighted average (weighting to be defined) of the prices of operations by all parties trading on the day in question

When GRTgaz intervenes on the market:

The marginal price is then the price with the highest impact between the previous price and a price based on GRTgaz's transaction.

Marginal selling price = min (Average price - discount ; minimum transaction price by GRTgaz on the market)

Marginal buying price = max (Average price + premium; maximum transaction price by GRTgaz on the market)

The precise method of calculating the price, based on GRTgaz's market transactions, which is used in the above formulas, will have to be specified on the basis of discussions at the European level and under the Gas Concertation consultation process (in particular to deter transactions on very small volumes, which would lead to an unrepresentative marginal price).

The size of the premium and/or discount is based on the following principles:

- The premium and/or discount are incentives to balancing, which are needed when the TSO does not intervene on the market.
- The premium and/or discount will be low and unconnected with the one currently used to determine the price P2 on the basis of P1.

5.4.3.3. Proposal for new tolerances in the target system

Provided that they comply with European rules under discussion or to come, GRTgaz proposes to apply tolerance to the end-customer portfolio. Below that tolerance, an average price will be applied to the imbalance. Beyond that, the marginal price will apply.

The general principles used in setting the level of this tolerance will be proposed by GRTgaz at upcoming consultation meetings, and are as follows:

- taking into account the quality of within-day information provided to the market for each portfolio category (PLC, DD/PITD customers and non-profiled customers);
- taking into account the liquidity and opening hours of the market;
- methods of calculation that avoids penalising small¹ portfolios (in particular for new entrants);
- maintaining the "balance" in the rules, in particular the incentive nature of the marginal price;
- possible change to the tolerance, subject to feedback.

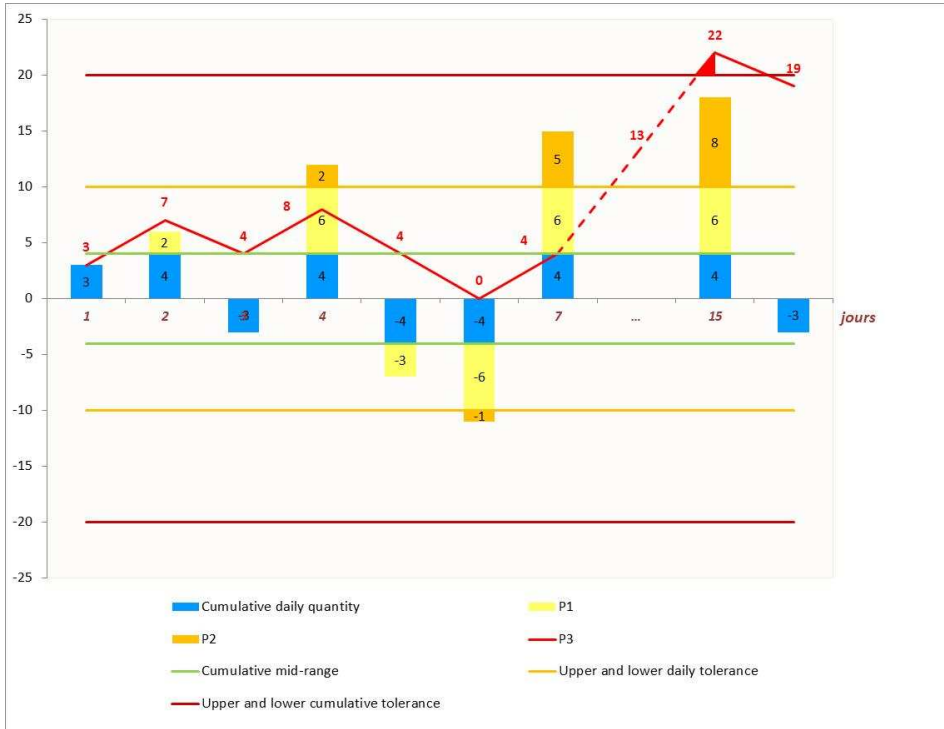
N.B. shippers with no end customers will therefore have no tolerance, and their imbalance will be cashed out at the marginal price right from the first kWh of imbalance.

5.4.3.4. Illustration

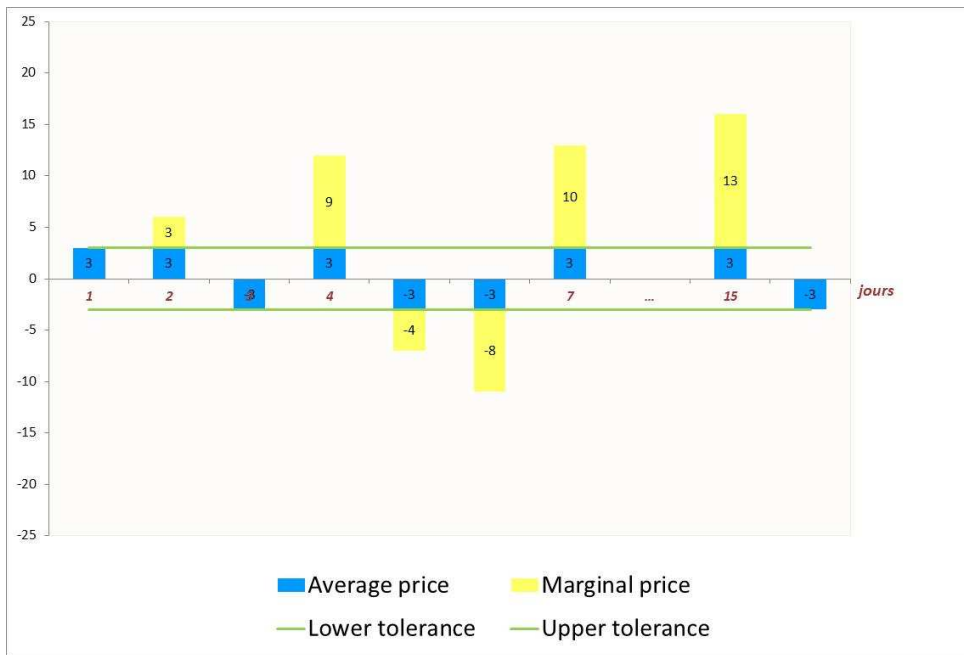
The following illustrations follow the story of one shipper's imbalance, first under the existing balancing system, then under the target system for the same daily imbalance value.

The current picture is as follows:

¹ What a "small" portfolio is remains to be defined



The same data under the target system produce the following picture:



5.5. Roadmap to achieve the target system

5.5.1. Transition period before switchover

Today, and since May 1, 2011, shippers have benefited from a system of mid-ranges below which the imbalances are accumulated according to the following rules:

Mid-ranges in % of tolerance:

- 20% North zone H-Gas, 35% North zone L-gas and South zone in summer (May-September)
- 40% in winter (October-April) whatever the zone

Cumulative Imbalance (EBC):

EBC max = 5 x Mid-Range i.e. maximum possible cumulative daily imbalance of 5 days

The proposed target system leads to a certain number of changes, which will ultimately eliminate mid-ranges and cumulative imbalances (together with allocation imbalance accounts). In order to allow time to learn the new rules, GRTgaz is proposing a transitional phase based on the following principles:

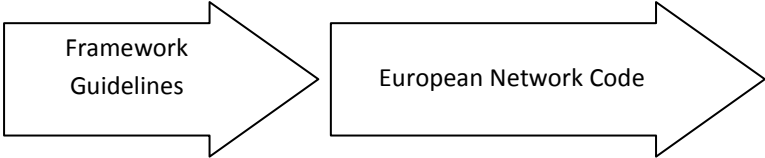
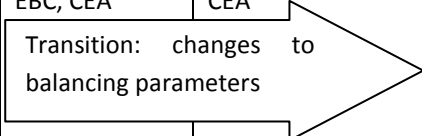
- Maintenance of the current balancing principles.
- Gradual shift in the balancing parameters in order to encourage shippers to play a more active part in balancing their portfolios. For example:
 - o Reduction in mid-ranges (largest exposure to P1)
 - o Maintenance of absolute value of EBC (no change to exposure to P3)
- Provision of targeted system information for each shipper, so that users can prepare for the target system.
- Link with changes in GRTgaz's interventions in the market.

The timetable for the transitional phases is as follows:

- from the end of 2012, depending on intervention volumes following introduction of the quantitative indicator
- during 2013 depending on information published for each shipper
- full implementation of target system in 2014

5.5.2. Summary timeline of proposed changes

The table below summarises all the proposals made in this document.

					
	Current situation	Objective Start 2012	Objective End 2012	2nd half 2013	2014: target system
Market interventions	1 session DA 1 session WD Maximum intervention volumes	1 session DA 2 sessions WD if need confirmed Influence of stress indicator on intervention volumes	Focus on 2 WD sessions Interventions reflecting indicator	Focus on 2 WD sessions Interventions reflecting indicator	Possible continuous interventions Price-Volume Strategy
Information to the market	<u>System:</u> GRTgaz's BZ forecasts <u>Shippers:</u> PLC 5 times a day	<u>System:</u> GRTgaz's BZ forecasts Semi-quantitative stress indicator <u>Shippers:</u> PLC 5 times a day	<u>System:</u> GRTgaz's BZ forecasts Quantitative stress indicator <u>Shippers:</u> PLC 5 times a day	<u>System:</u> GRTgaz's BZ forecasts broken down between PLC and PITD Quantitative stress indicator <u>Shippers:</u> PLC every hour Profiled customer forecasts at least on PITD	<u>System:</u> GRTgaz's BZ forecasts broken down between PLC and PITD Quantitative stress indicator Updated marginal price <u>Shippers:</u> PLC every hour Profiled customer forecasts at least on PITD
Balancing rules	P1, P2, P3, EBC, CEA	P1, P2, P3, EBC, CEA	P1, P2, P3, EBC, CEA	P1, P2, P3, EBC, CEA 	End of mid-ranges Review of tolerances Marginal price for imbalance cash-outs

6. RECAP OF HISTORY OF CHANGES IN THE BALANCING SYSTEM

1st half 2006: GRTgaz proposes to CRE to change its balancing system to a target system based on market mechanisms.

June 2006: Ruling by CRE on June 26 following public consultation, firstly taking up GRTgaz's proposal of a shift towards market mechanisms, and secondly asking GRTgaz to set up a consultation system with market players, to define new detailed balancing rules within the framework of a gradual move towards a target system based on market mechanisms.

August 2007: Proposal by GRTgaz based on consultation for a set of balancing rules to be applied from September 1, 2007. These rules were approved by the CRE ruling of August 23, 2007.

October 2008: marginal changes in certain parameters on the "Balancing GRTgaz" platform, to be implemented simultaneously with the launch of the Powernext Gas exchange, in order to maintain the quality of the market prices generated by the platform. This change was approved by the CRE ruling of October 23, 2008.

September 2008: Incorporation of the consultation body on the balancing rules into the "Concertation Gaz" consultation process and creation of the "Balancing" working group.

November 2008: Proposal by GRTgaz to adjust the distribution of standard tolerances to reflect the constraints associated with the size of shipper portfolios and the balancing zone. This change was approved by the CRE ruling of November 26, 2008.

October 2009: Proposal by GRTgaz to intervene on the POWERNEXT Gas exchange from December 1, 2009, in order to cover part of its gas requirements for balancing its transmission system, including the conditions under which GRTgaz intervenes and sets cash-out prices. These provisions are covered in the CRE ruling of October 8, 2009.

March 2010: Following work in the Concertation Gaz process, a proposal by GRTgaz is to abandon the Balancing platform following the satisfactory feedback on its operations over the first three months of the year on the POWERNEXT Gas exchange; to increase the intervention volumes; to reduce the value of the mid-range of imbalances that could be accumulated for the period May 1 to September 31, 2010. These changes were approved by the CRE ruling of April 15, 2010.

June 2010: Proposal by GRTgaz on the principles for a more market-based system for balancing its transmission system to be introduced in 2013, under the European guidelines set out in Regulation No. 2009/715. These principles were approved in the CRE ruling of September 30, 2010, which also provides for the roadmap towards the target system and its detailed description to be defined under the Concertation Gaz consultation process by June 30, 2011.

February 2011: proposal by GRTgaz to change the balancing rules from **May 1, 2011:** reduction in the cumulative imbalance mid-ranges, reduction in the P3 penalty price, change in intervention volumes. These changes were approved by the CRE ruling of March 17, 2011.

May 25, 2011: change in the strategy of GRTgaz's trading algorithm to find the best limit order for each intervention in a session.