



TARGET BALANCING SYSTEM

PROPOSAL FOR SHORT-TERM CHANGES TO  
MARKET INTERVENTIONS BY GRTGAZ AND  
WITHIN-DAY INFORMATION ON CONSUMPTION  
ON THE DISTRIBUTION SYSTEMS

## Contents

1.	BACKGROUND.....	3
2.	PURPOSE.....	3
3.	SHORT-TERM CHANGES TO MARKET INTERVENTIONS BY GRTgaz .....	3
3.1.	GRTgaz’s market intervention strategy .....	3
3.2.	Proposal for short-term changes to market interventions .....	4
a.	Analysis of the transmission system’s balancing needs .....	4
b.	Proposed changes.....	4
c.	Introduction period.....	7
4.	PROVISION OF INFORMATION TO EACH SHIPPER ON DISTRIBUTION CUSTOMERS .....	7
4.1.	Profiled customers.....	7
4.2.	Non-profiled customers.....	8

## 1. BACKGROUND

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The two proposed changes are part of the target roadmap proposed by the TSOs in September 2011 and the CRE ruling of December 1, 2011. They are the outcome of the different meetings of the Balancing working group within the “Concertation Gaz” consultation process, in particular the meeting of April 4, 2012.

## 2. PURPOSE

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The proposed changes apply to two areas:

- In the short term, a change in GRTgaz’s market interventions for its own balancing needs, resulting in the removal of the Day Ahead trading window (base case)
- With regards to the information sent to shippers in relation to the target balancing system:
  - o Twice daily publication for each portfolio of past consumption by non-profiled customers on the distribution systems,
  - o Confirmation of GRTgaz’s September 2011 proposal to at least publish day-ahead raw forecasts for each portfolio of consumption by profiled customers on the distribution systems, with two updates over the gas day.

## 3. SHORT-TERM CHANGES TO MARKET INTERVENTIONS BY GRTgaz

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### 3.1. GRTgaz’s market intervention strategy

The purchase/sales strategy at the Exchange is defined in consultation with 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. The time of these windows may be modified in consultation with the market. Today, GRTgaz intervenes :

- 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:

	Trading volume during sessions:	
Balancing zone	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

### 3.2. Proposal for short-term changes to market interventions

#### a. Analysis of the transmission system’s balancing needs

GRTgaz trades in the market on the basis of an estimate of the system’s imbalance status. This calculation is made by comparing the nominations made by shippers on the system entry and exit points and the GRTgaz’s demand forecast for the balancing zone.

Shippers’ nominations and the forecast are known the previous day with a significant degree of uncertainty. In consequence, the probability of correctly forecasting the end-of-day status of the system is low, with the exception of specific cases of high expected imbalance. These characteristics are all the more marked for a trading window located at 4:30 p.m., a time when shippers’ nominations are still highly provisional.

During the day, the main factors that provide a better calculation of the system’s needs are the previous day’s allocations, known in early afternoon, and to a lesser degree the updated weather forecasts. Knowing a significant number of consumption hours in the current day can also help to improve this calculation. This means that GRTgaz can make a more accurate forecast of the system’s end-of-day imbalance status after the previous day’s allocations are published, and on the basis of consumption reports for a significant part of the current gas day. The information available in the morning would not significantly improve forecasts relative to the currently observed quality of the previous day’s forecasts.

At the consultation meeting of April 4, 2012, the possibility was raised of changing the trading window, either to slightly earlier on the basis of updates to GRTgaz’s forecast, or by extending the possible trading period, for example to 30 minutes instead of 15 minutes. However, GRTgaz proposes to retain the current trading window for the moment, because ultimately this could only be brought forward by a small amount (around half an hour earlier) and because 15 minutes seems to be a long enough period to cover needs.

#### b. Proposed changes

Following this analysis, GRTgaz proposes the following short-term changes:

- In the base case: Dropping the Day-Ahead trading window (with possible market interventions in the event of a high expected system imbalance, at the same period, i.e. from 4:30 p.m. to 4:45 p.m.). In the base case, this change will also ultimately avoid possible interferences with the coupling mechanism;

- A market intervention focused on the Within-Day product from 3:45 p.m. to 4 p.m., with Day-Ahead product trading volumes being carried over to Within-Day;
  - A resulting change to the reference price P1, consistent with the target system and market balancing focused on Within-Day;
  - Retention of the week-end window at the existing times.
- Intervention volumes

As regards trading volumes, this will result in the following values:

Balancing zone	Optional Day-Ahead session	Trading volume during sessions:	
		Within-Day session (s)	Week-End session
North Zone	0 (base case), trading up to 2,000 MWh/d if large imbalance expected	from 0 to 7,750 MWh/d	from 0 to 2,000 MWh/d
South Zone	0 (base case), trading up to 1,500 MWh/d if large imbalance expected	from 0 to 5,500 MWh/d	from 0 to 1,500 MWh/d

- Defining the Reference price P1

If Day D is a Week Day, with trading on Powernext Gas Spot: for each Balancing Zone Z, the Reference Price for each Week Day – P1(D,Z) – is equal to:

- The Within-day component if GRTgaz has no Day-Ahead needs (base case);
- X% of the Day-ahead component and Y% of the Within-day component as defined below;

Where:

X% expresses the percentage ratio between the maximum Day Ahead intervention volume and the sum of maximal intervention volumes in Day Ahead and Within Day ;

Y% expresses the percentage ratio between the maximum intervention volume in Within Day and the sum of maximum intervention volumes in Day Ahead and Within Day.

The *Day-Ahead component* is equal:

- for the North Balancing Zone – H-gas and for the South Balancing Zone:
  - to the mean weighted by the prices of transactions concluded by GRTgaz for delivery on Day D at the North Gas Title Transfer Point (respectively South Gas Title Transfer Point) for the Day-Ahead timeframe;
  - in the absence of transactions concluded by GRTgaz, to the Powernext Gas Spot End-Of-Day (EOD) reference price for the Day-Ahead timeframe corresponding to delivery on Day D at the North Gas Title Transfer Point (respectively South Gas Title Transfer Point);

- for the North Balancing Zone – L-gas:
  - to the sum of the price defined above for the North Balancing Zone – H-gas one and €0.16/MWh.

The *Within-Day component* is equal:

- for the North Balancing Zone – H-gas and for the South Balancing Zone:
  - to the mean weighted by the prices of transactions concluded by GRTgaz for delivery on Day D at the North Gas Title Transfer Point (respectively South Gas Title Transfer Point) for the Within-Day timeframe;
  - in the absence of transactions concluded by GRTgaz, to the price reference determined by Powernext for the Within-Day timeframe corresponding to delivery on Day D at the North Gas Title Transfer Point (respectively South Gas Title Transfer Point); (This price reference will be determined using Powernext Gas Spot EOD price reference method with parameters specific to the Within-Day timeframe, but only insofar as the market conditions allow, i.e. if it is not necessary to set up a price committee).
- for the North Balancing Zone – L-gas:
  - to the sum of the price defined above for the North Balancing Zone – H-gas and €0.16/MWh.

If the Within-Day component cannot be determined (no transactions conducted by GRTgaz and market conditions not being met to determine a price reference), the Reference Price P1 (D,Z) is equal to the Day-Ahead component as previously defined.

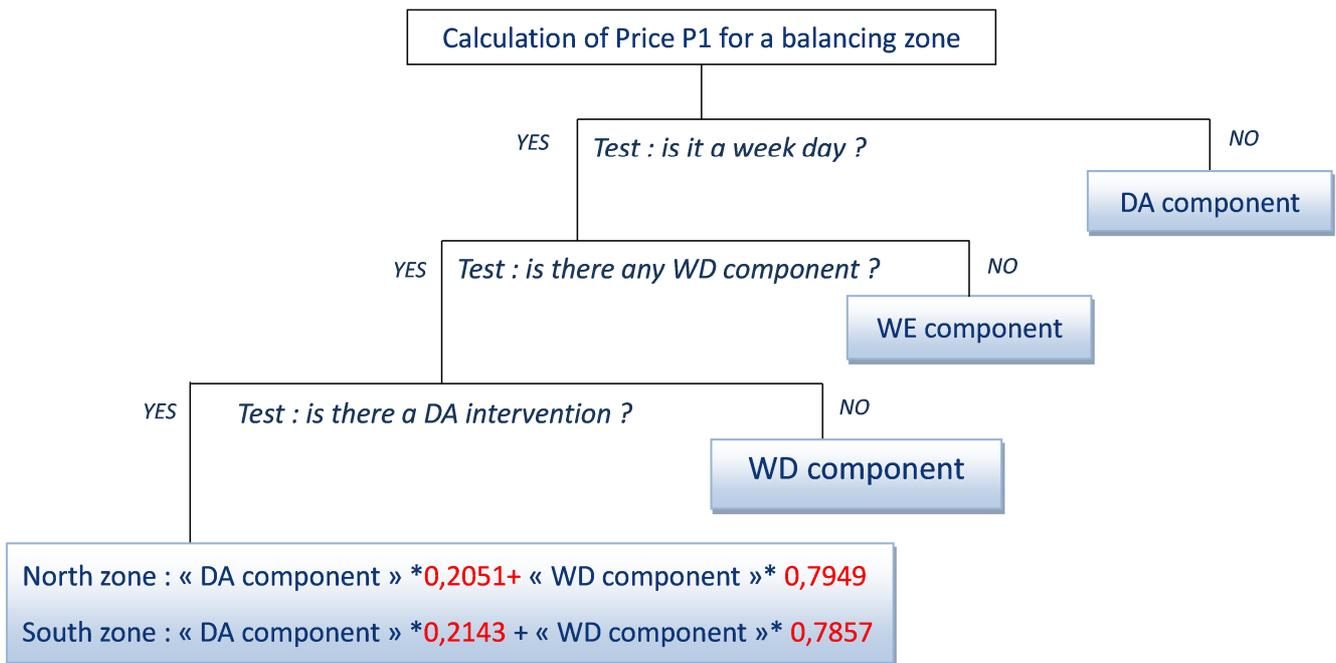
**If Day D is a Week-End Day with trading on Powernext Gas Spot**, for each Balancing Zone Z, the Reference Price for each Week-End Day P1(D,Z) is equal:

- for the North Balancing Zone – H-gas and for the South Balancing Zone:
  - to the mean weighted by the prices of transactions concluded by GRTgaz for the Week-End period containing Day D at the North Gas Title Transfer Point (respectively South Gas Title Transfer Point);
  - in the absence of transactions concluded by GRTgaz, to the Powernext Gas Spot (EOD) reference price for the Week-End containing Day D at the North Gas Title Transfer Point (respectively South Gas Title Transfer Point).
- for the North Balancing Zone – L-gas:
  - to the sum of the price defined above for the North Balancing Zone – H-gas and €0.16/MWh.

**If Day D is a Day with no trading on Powernext Gas Spot**, for each Balancing Zone Z, the Reference Price for that Day P1(D,Z) is equal:

- for the North Balancing Zone – H-gas and for the South Balancing Zone:
  - to the Powernext Gas Spot EOD reference price determined by Powernext (via a Price Committee) for delivery on Day D at the North Gas Title Transfer Point (respectively South Gas Title Transfer Point);
- for the North Balancing Zone – L-gas:
  - to the sum of the price defined above for the North Balancing Zone – H-gas and €0.16/MWh.

By way of example, for the North Balancing Zones – H-gas, and for the South Zone, the reference price P1 will be set as follows:



### c. Introduction period

These changes, if accepted, and following the CRE ruling, will take effect on the first day of a month, so that the reference price P1 for a given month can be calculated uniformly. GRTgaz will inform the market at least one month before the change is implemented. At present, the likely date is July 1, 2012.

## 4. PROVISION OF INFORMATION TO EACH SHIPPER ON DISTRIBUTION CUSTOMERS

### 4.1. Profiled customers

- **Raw forecasts per portfolio**

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.

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).

- **Adjusted forecasts**

The Consultation Group is still working on the suggested possibility 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:

$$\text{Overall forecast GRTgaz} = \sum_{\text{EXP}} \text{Estimates\_Non-profiled} + k_0 \times \sum_{\text{EXP}} \text{Estimates\_Profiled}.$$

#### **4.2. Non-profiled customers**

The proposal by the DSOs is to provide information on consumption by so-called non-profiled customers, respectively at 12 noon for the first four hours of the gas day, then at 4 p.m. for the first eight hours of the gas day, for each Distribution Contract and for each PITD.

The next step for the TSOs is to:

- Allocate these quantities for each shipper portfolio, i.e. for each Transmission Contract (CAT) per PITD on the basis of the joint declarations;
- Publish this information in the same way as they publish information on consumption during the course of the day by customers directly connected to the transmission system.

Subject to a more detailed study by GRTgaz's IT services, it should be possible to publish less than one hour after receipt of the information sent by the DSOs, i.e. before 1 p.m. and before 5 p.m. This change to GRTgaz's information system is compatible with the timetable proposed by the DSOs.